Armstrong FLOORS

WALLS AND COUNTER TOPS

TECHNICAL DATA

1958

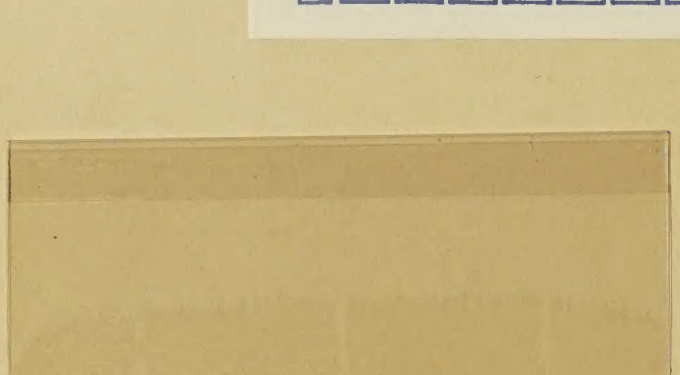
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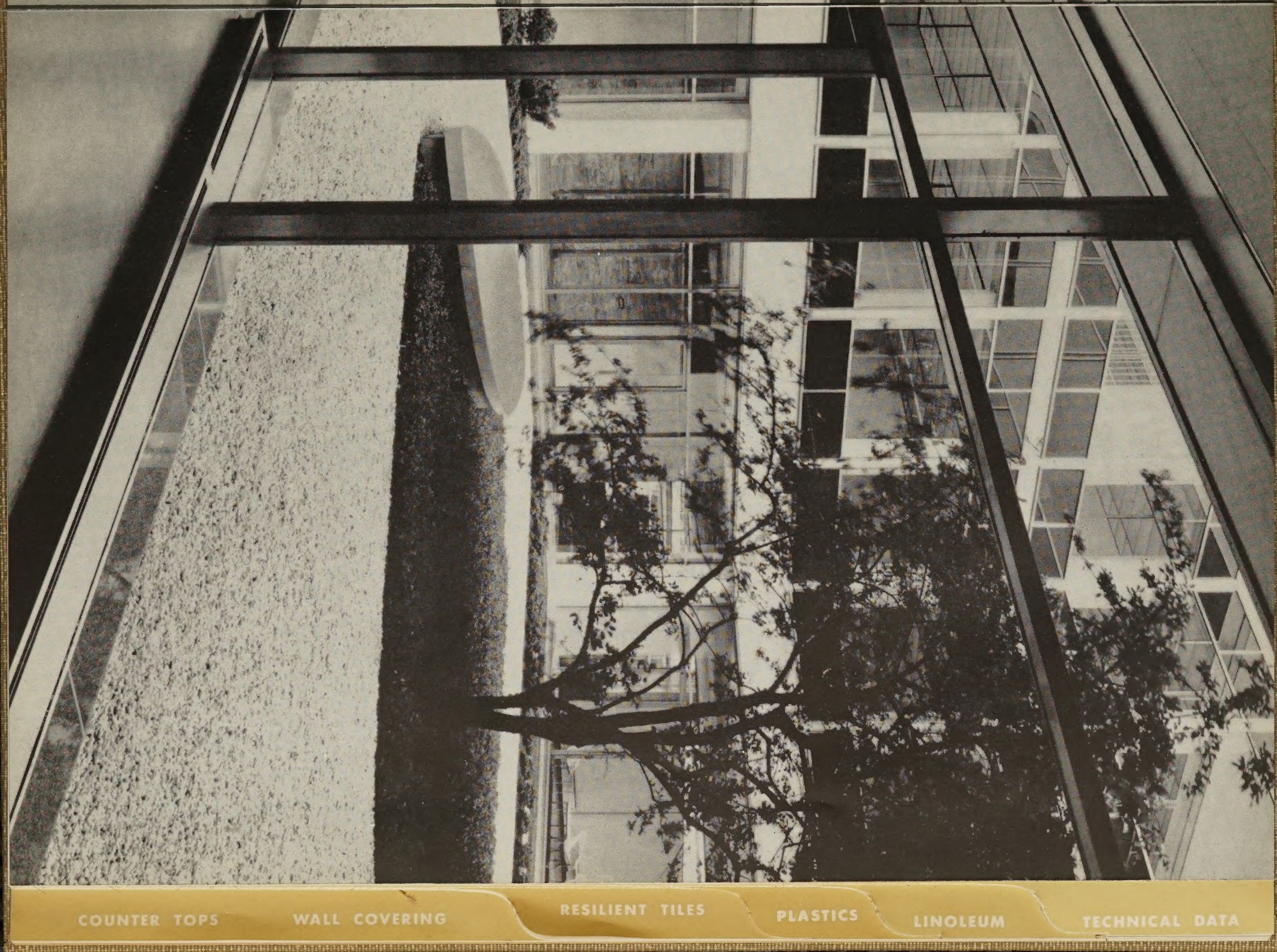
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Floor: Armstrong Linotile
Architects: Skidmore, Owings and Merrill, New York City



COUNTER TOPS WALL COVERING RESILIENT TILES PLASTICS LINOLEUM TECHNICAL DATA



MEMBER

We acknowledge the assistance of the American Institute of Architects in editing the subject matter and form of presentation of this manual.

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Armstrong FLOORS

WALLS AND COUNTER TOPS

TECHNICAL DATA

1958

TECHNICAL DATA
LINOLEUM
PLASTICS
RESILIENT TILES
WALL COVERING
COUNTER TOPS

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SECTION TWO—Colors and Stylings

Armstrong CORK COMPANY FLOOR DIVISION, LANCASTER, PENNSYLVANIA

ARMSTRONG SERVICES TO ARCHITECTS

Armstrong Cork Company makes all types of resilient floors for all types of interiors. Almost any flooring requirement can be met with one or more of the floors in the Armstrong Line. As a result, we can offer unbiased recommendations on any flooring problem. Our main interest is, of course, to aid you in making a sound flooring selection. For complete information or recommendations on specific job requirements, contact the nearest Armstrong District Office or write to Armstrong Cork Company, Floor Division, Lancaster, Pa.

Architectural-Builder Consultants, a special group of Armstrong representatives, have been assigned the exclusive responsibility of working directly with architects, decorators, and interior designers on flooring problems. Armstrong Sales Representatives, an organization of over 125 men, also devote much of their time to such consultations. Together, these two groups represent an exceptional fund of experience and training in resilient flooring. Architectural-Builder Consultants and Armstrong Sales Representatives are located throughout the country and will gladly consult on any flooring problem and make specific recommendations for individual jobs.

Complete Specifications on the installation of any Armstrong Floor, Wall, and Counter-Top Materials are available upon request. For abridged specifications, see pages 39–43.

Armstrong Bureau of Interior Decoration, staffed with experienced interior designers, will, without obligation, suggest to you or your color consultant designs for floors, walls, and ceilings with complete room color schemes if desired.

ARMSTRONG FLOOR DIVISION OFFICES

Atlanta 8.....727 W. Peachtree Street, N. E.

Baltimore 2.....114 Sauth Street

Boston.....200 First Ave.
New England Industrial Center
Needham Hts. 94, Mass.

Buffalo 23.....1674 Kenmare Avenue

Chicago 54.....13–136 The Merchandise Mart

Cincinnati 37.....1057 Meta Drive

Cleveland 14.....2975 Superiar Avenue

Dallas 7.....1824 N. Industrial Blvd.

Denver 4.....35 West Fifth Avenue

Detroit 26.....Free Press Building
321 Lafayette Avenue, West

High Point...Sauthern Furniture Expasitian Building

Kansas City 8.....500 West 26th Street

Los Angeles 22.....5983 East Smithway Street

Minneapolis 6.....4539 Hiawatha Avenue

New Orleans 25.....7010 Washingtan Avenue

New York 16.....295 Fifth Avenue

Philadelphia 2.....Rabinson Building
Fifteenth and Chestnut Streets

Pittsburgh 22.....24th Street and Allegheny River

St. Louis 10.....1919 Hamptan Avenue

San Francisco 3.....Western Merchandise Mart
1355 Market Street

Seattle 1.....803 Terminal Sales Building
1932 First Avenue

Canada...6911 Decarie Blvd., Mantreal 29, Quebec

ARMSTRONG MANUFACTURING PLANTS (Floor Division)

Jackson, Miss......Asphalt Tile, Excelan Tile

Kankakee, Ill......Asphalt Tile, Excelan Tile

Lancaster, Pa......Asphalt Tile, Corlan Sheet Plastics, Excelan Tile, Linaleum, Linotile, Plastic Wall Tile, Vinyl Plastic Surfacing

Pittsburgh, Pa......Cork Tile, Custam Vinyl Cark Tile

South Braintree, Mass......Custam Carlon Tile, Rubber Tile

South Gate, Cal......Asphalt Tile, Excelan Tile

ARMSTRONG RESEARCH AND DEVELOPMENT CENTER

Lancaster, Pa.

ARMSTRONG BUREAU OF INTERIOR DECORATION

Lancaster, Pa.

Architects, designers, and decorators are invited to visit Armstrong District Offices, Manufacturing Plants, the Research and Development Center, and the Bureau of Interior Decoration. Such visits provide opportunities to discuss flooring requirements and to observe styling and manufacturing methods.

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TRADE-MARKS

Armofelt, Corlex, Corkstyle, Craftline, Cushion-Eze, Decoray, Decoresq, Estate, Excelon, Futuresq, Granette, Hydrocord, Imperial, Linogloss, Linostrip, Linotile, Marbelle, Royelle, Spatter, Temboard, Textelle are trade-marks of the Armstrong Cork Company, Lancaster, Pennsylvania.

Table of physical characteristics and comparative

FLOORING	PAGE	GAUGES	BASIC MATERIALS	WHERE TO USE	MAXIMUM STATIC LOAD LIMITS (LBS. PER SQ. IN.) BEARING SURFACE	RATING IN ORDER OF RESILIENCE (POTENTIAL UNDERFOOT COMFORT)
CORLON						
Decoresq						
Armofelt Back	104	.070″	Vinyl Resins	Suspended	75	4
Hydrocord Back		.0625″	Vinyl Resins	Below-, On-Grade	75	4
Granette	98	.070″	Vinyl Resins	Suspended	75	4
Mosaic	107	.070″	Vinyl Resins	Suspended	75	4
Terrazzo						
Armofelt Back	101	.070″	Vinyl Resins	Suspended	75	4
Hydrocord Back		.0625″	Vinyl Resins	Below-, On-Grade	75	4
LINOLEUM						
Embossed	65	.090″	Oleorcsinous Compound	Suspended	75	4
Craftline	82	.090″	Oleoresinous Compound	Suspended	75	4
Imperial	79	.090″, .125″	Oleoresinous Compound	Suspended	75	4
Jaspé	61	.125″	Oleoresinous Compound	Suspended	75	4
Marbelle	62	.070″, .090″, .125″	Oleoresinous Compound	Suspended	75	4
Plain	58	.090″, .125″	Oleoresinous Compound	Suspended	75	4
Spatter	90	.090″	Oleoresinous Compound	Suspended	75	4
Royelle	94	.090″	Oleoresinous Compound	Suspended	75	4
Decoray	84	.090″	Oleoresinous Compound	Suspended	75	4
Textelle	86	.125″	Oleoresinous Compound	Suspended	75	4
RESILIENT TILES						
Asphalt Tile (Standard and Greaseproof)	112	1/8″, 3/16″	Asphaltic Compounds	Below-, On-Grade, Suspended	25	7
Cork Tile	127	3/32″, 1/8″, 3/16″, 5/16″	Raw Cork and Resins	Suspended and On-Grade (See Page 50)	75	1
Custom Corlon Tile	128	3/32″, 1/8″	Vinyl Resins	Below-, On-Grade, Suspended	200	2
Custom Vinyl Cork Tile	127	1/8″	Cork and Vinyl Plastic Resins	Suspended and On-Grade (See Page 50)	125	3
Excelon Tile	118	Service Gauge (1/16″) and 1/8″	Plastic Asbestos Containing Vinyl	Below-, On-Grade, Suspended	25	6
Linoleum Tile	132	.065″, .090″	Oleoresinous Compound	Suspended	75	4
Linotile	124	1/8″	Oleoresinous Specially Processed	Suspended Heavy Traffic	200	5
Rubber Tile	122	1/8″, 3/16″	Rubber Compounds	Below-, On-Grade, Suspended	200	2
WALL COVERINGS						
Vinyl Plastic Surfacing	140	.045″	Vinyl Resins	Residential, Institutional, and Commercial Areas		
Vinyl Wall Tile	141	1/16″	Vinyl-Asbestos	Residential, Institutional, and Commercial Areas		
COUNTER TOPS						
Corlex	142	1/16″	Plastic Laminate	Residential, Institutional, and Commercial		
Vinyl Plastic Surfacing	140	.045″	Vinyl Resins	Residential, Institutional, and Commercial		

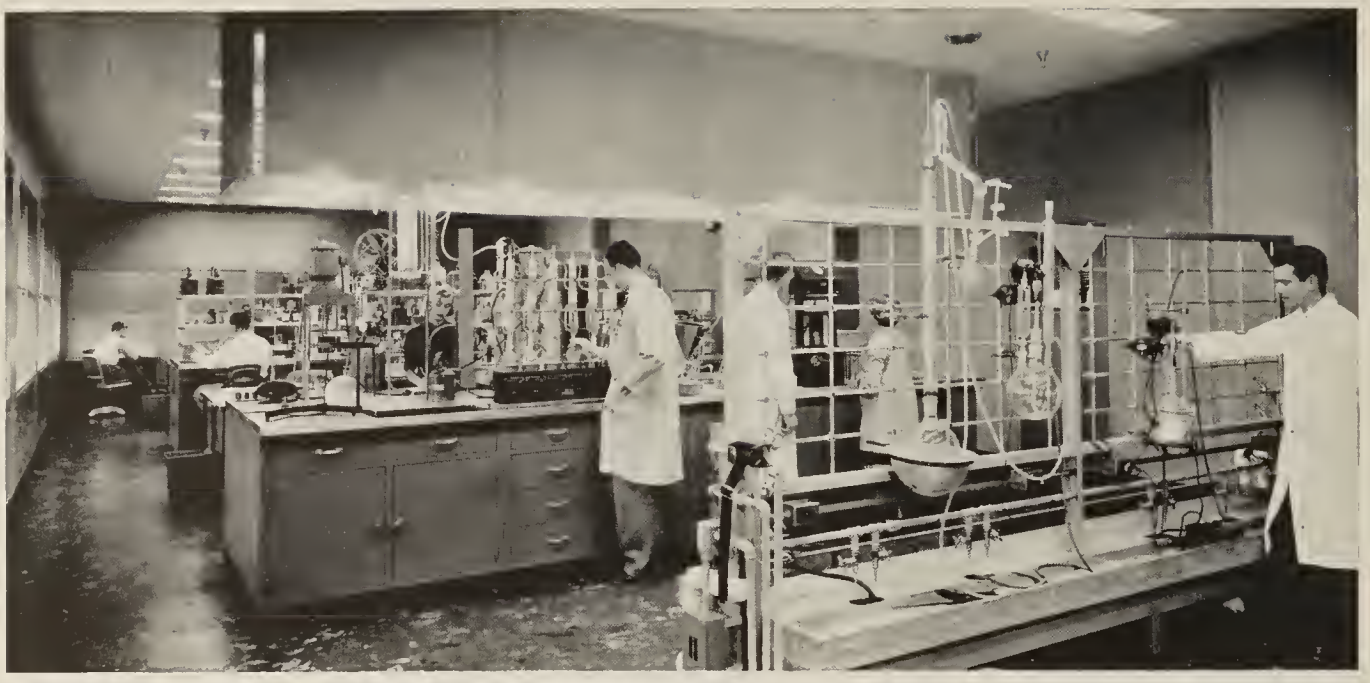
Distribution—Armstrong floor, wall, and counter-top materials are sold by flooring contractors and floor covering retailers. The names of reliable installers of Armstrong products in any locality can be obtained from any district or branch office of the Armstrong Cork Company.

costs of Armstrong floors, walls, and counter tops

THERMAL CONDUCTIVITY BTU/HR. SQ. FT. °F/1" (SEE PAGE 20)	RELATIVE QUIETNESS	GREASE RESISTANCE	SURFACE ALKALI RESISTANCE	DURABILITY RATING	APPROXIMATE† INSTALLED PRICE PER SQ. FT. OVER CONCRETE	EASE OF MAINTENANCE	FEDERAL SPECIFICATIONS
1.2 1.4	4 4	Excellent Excellent	Excellent Excellent	Excellent Excellent	45¢–50¢ 50¢–60¢	Excellent Excellent	None Evolved
1.2	4	Excellent	Excellent	Excellent	45¢–50¢	Excellent	None Evolved
1.2	4	Excellent	Excellent	Excellent	45¢–50¢	Excellent	None Evolved
1.2 1.4	4 4	Excellent Excellent	Excellent Excellent	Excellent Excellent	45¢–50¢ 50¢–60¢	Excellent Excellent	None Evolved
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	35¢–45¢	Excellent	LLL-F-471
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	35¢–45¢	Excellent	LLL-F-471
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	35¢–60¢	Excellent	LLL-F-471 LLL-L-367
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	40¢–55¢	Excellent	LLL-L-307
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	30¢–60¢	Excellent	LLL-F-471 LLL-L-367
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	35¢–55¢	Excellent	LLL-L-351b LLL-F-471, LLL-L-367
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	35¢–45¢	Excellent	LLL-F-471
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	30¢–40¢	Excellent	LLL-F-471
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	30¢–40¢	Excellent	LLL-F-471
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	45¢–60¢	Excellent	LLL-L-367
3.1	6	A & B Colors Poor; C & D Colors Fair; Greaseproof Asphalt Tile Excellent	Excellent	Excellent	20¢–45¢	Good	SS-T-306b SS-T-307
0.45	1	Fair	Fair	Good	45¢–90¢	Fair	None Applicable
5.3	2	Superior	Excellent	Superior	70¢–90¢ Imperial Series and Plain Colors—95¢–$1.30	Superior	L-T-751 (GSA-FSS)
0.73	3	Excellent	Excellent	Good	95¢–$1.30	Superior	None Evolved
3.1	6	Excellent	Excellent	Superior	35¢–60¢	Superior	L-T-751 (GSA-FSS)
Light Colors 1.7 Dark Colors 1.2	4	Excellent	Poor	Good	20¢–45¢	Excellent	LLL-F-471
Light Colors 1.7 Dark Colors 1.2	5	Excellent	Poor	Superior	60¢–70¢	Superior	None Evolved
5.3	2	Good	Good	Good	60¢–90¢	Good	ZZ-T-301A
		Excellent	Excellent	Excellent	55¢–75¢*	Superior	None Evolved
		Excellent	Excellent	Excellent	45¢–60¢*	Superior	None Evolved
		Excellent	Excellent	Excellent	90¢–$1.50*	Superior	MIL-T-17171A (Ships)
		Excellent	Excellent	Excellent	55¢–75¢*	Superior	None Evolved

*Over sound base

† Prices—Since these Armstrong materials are sold and installed by others, it is impossible for Armstrong Cork Company to furnish complete information on the installed cost. Armstrong contractors in your own locality will be glad to furnish quotations on specific work without obligation.



The Armstrong Research and Development Center occupies a series of modern structures totaling more than 160,000 square feet of floor space. A staff of over 350 scientists and technicians is constantly occupied with the development of new products and improving and lowering costs on existing products. Facilities embrace physical testing as well as basic and applied research.

New developments in resilient floors

The variety of resilient floors offered for selection today is the result of the needs of modern society and changing trends in building. Factors such as concrete subfloors in direct contact with the ground, radiant heating, styling, comfort and quietness underfoot, the amount of money budgeted for floors—all have an important bearing on the flooring selection. Since these conditions and requirements vary widely from project to project, there is a need for different types of floors with specific characteristics to meet individual circumstances.

Today's Floors Are "Engineered"

As a result of such widely varied requirements, modern floors must be engineered to meet these conditions. Working hand in hand with architects, builders, and designers, the staff of the Armstrong Research and Development Center helps solve new and complex flooring problems. The joint efforts of these groups have been responsible for many new types of resilient floors as well as improvements in existing materials.

The primary objective of resilient floor research and engineering is to develop maximum service characteristics at minimum costs. The ultimate goal is a universal flooring material combining all physical characteristics for installation over any and all types of subfloors.

Until such a flooring millenium is achieved, research, science and engineering will continue to develop new and different materials to meet the needs as they arise.

Product Advancements

Two recent product advancements, developed through Armstrong research, that have contributed to new concepts of resilient floors are Hydrocord Back and Cushion-Eze Underlayment.

Hydrocord Back is a moisture- and alkali-resistant backing applied directly to sheet vinyl Corlon and Vinyl Plastic Surfacing in the manufacturing process. It permits the satisfactory installation of sheet vinyl flooring direct to concrete subfloors in basements as well as on grade. On Vinyl Plastic Surfacing, the Hydrocord Back is an additional guard against deterioration of the plastic surfacing from moisture in walls and from splashing around sinks and basins.

Cushion-Eze Underlayment is an air-filled foam "padding" for use in place of conventional lining felt under many types of resilient floors. It adds a new concept of underfoot comfort and quietness to resilient floors. Cushion-Eze Underlayment is more fully described on page 24.

Styling Advancements

A new high-style inlaid vinyl sheet flooring that combines clear, translucent and tinted vinyl chips with embedded glittering metallic particles has been put into limited production. Developed by Armstrong research engineers and floor stylists, the new sheet vinyl offering is known as the Futuresq Series in Armstrong Vinyl Plastic Corlon. Prototypes of the Futuresq styling were introduced last year in

the Monsanto House of Tomorrow in Anaheim, California. One of these installations is shown on page 25. Although the Corlon Futuresq Series is not widely distributed, complete information and samples are available at all Armstrong Floor Division District Offices.

Another unique floor styling newly developed by Armstrong is the Random Driftwood design in Custom Vinyl Cork Tile. This new styling has large shavings of cork spread at random over the face of each tile. A sheet of clear vinyl is fused into the surface of the tile.

General Advancements

Beyond the development of new products, Armstrong research scientists and engineers, along with experienced designers in the Armstrong Styling Center, are constantly working to improve the service qualities of existing materials and to keep them in line with changing style trends. Installation techniques are also under constant study at the Armstrong Installation School.

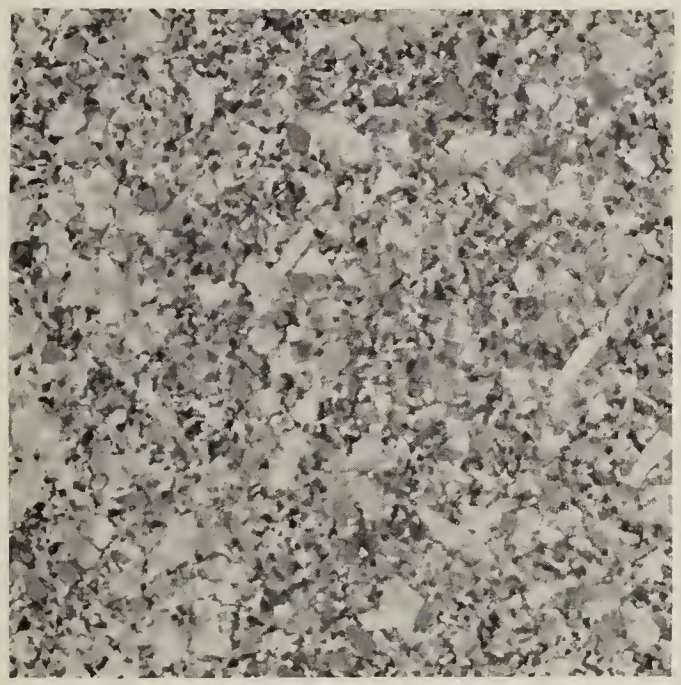
The information in this book represents the recommendations and products available as of January, 1958.



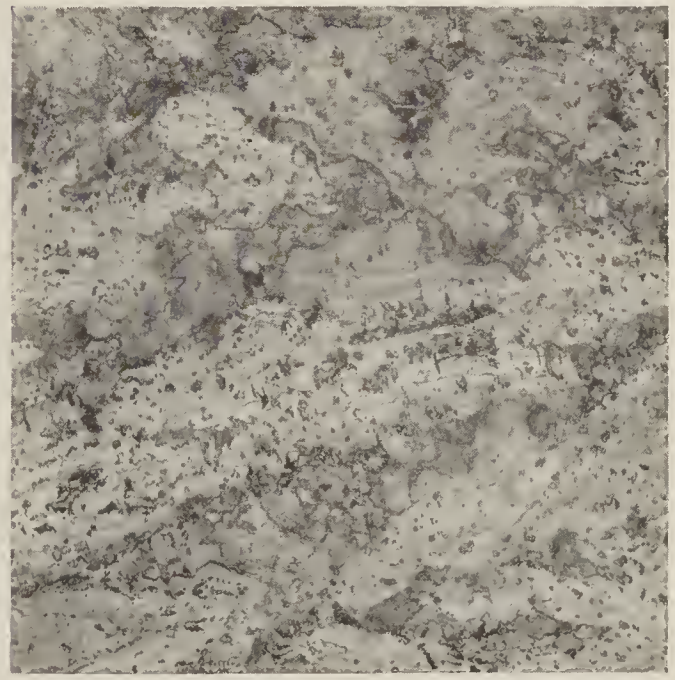
Cushion-Eze Underlayment is a recent development of Armstrong research. It offers a new concept of underfoot comfort and quietness when used with many types of resilient floors.



New Hydrocord Back created by Armstrong effectively resists alkaline moisture. It permits the installation of sheet plastic flooring over on-grade and below-grade concrete subfloors.



Gleaming metallic chips are embedded and combined with inlaid particles of clear, translucent, and tinted plastics to create the new Futuresq Series in sheet vinyl plastic Corlon.



The Random Driftwood styling in Custom Vinyl Cork Tile has cork shavings scattered over the face of the tile. A clear vinyl coating fused into the surface of the tile protects its beauty.

Which resilient floor goes where?

With the large variety of resilient flooring materials now available, some difficulty may be experienced in choosing the right resilient floor for installation over a particular type of subfloor. There are relatively few cases in which only one material will do a specific job. However, consideration of such factors as maintenance, moisture, and service conditions can help guide the selection of a resilient floor—no matter what subfloor is involved.

Moisture Conditions

There are three main types of moisture conditions which should be taken into account in choosing a resilient floor.

Moisture related to concrete subfloors. The moisture content of concrete suspended above grade, on grade, or below grade may seriously affect resilient flooring materials. The installation of resilient floors over concrete is more fully discussed on pages 17, 18, and 19.

Moisture related to wood subfloors. Wood subfloors constructed over sleepers on grade-level and below-grade concrete slabs are susceptible to moisture from the ground. Such a moisture condition usually results in the deterioration of the wood subfloor. Because of this possibility, resilient floors are not recommended for installation over this type of subfloor, not even those resilient floors that are unharmed by alkaline moisture.

Wherever a wood subfloor is constructed over an inadequately ventilated crawl space, there also is danger of moisture damage and consequent warpage to the subfloor, resulting in harm to the resilient floor itself. Crawl spaces should, therefore, be at least 18″ high and cross ventilated. Any of the various Armstrong resilient floors may be installed over wood subfloors in good condition if adequately suspended and ventilated beneath the subfloor.

Surface moisture. Around laundry equipment, lavatory fixtures, and in other areas where excessive water is likely to be spilled on the floor, moisture may find its way through the seams in the floor and attack the adhesive. Where surface moisture is a problem, the floors recommended for on-grade installation—Excelon Tile, Asphalt Tile, Rubber Tile, Custom Corlon Vinyl Tile, and Sheet Vinyl Corlon with Hydrocord Back—will give satisfactory service when installed with waterproof adhesives. On suspended floors, sheet flooring materials—Linoleum and Corlon—are least susceptible to the seepage of surface moisture because they can be installed with minimum seams. Naturally, the fewer seams or joints in the floor the less opportunity exists for surface moisture to seep under the flooring.

Service Conditions

Resilient flooring materials should always be selected with service conditions in mind, since the wear a floor receives has great bearing on how long it will retain its utility and beauty. Just as service conditions may range from light wear to constant foot traffic and frequent cleaning—so do resilient flooring products vary in their abilities to withstand harsh treatment.

Light or heavy traffic. In residential installations, wear is not usually an important factor in the choice of a resilient flooring material. In most cases, these floors will be replaced for decorative reasons long before they wear out. Here, most resilient flooring products are satisfactory from the standpoint of wear, and the final choice is often based on price, preference for a design or pattern, or other considerations such as grease resistance. In commercial installations, on the other hand, excessively heavy traffic sometimes makes wear a limiting factor in flooring life. Where this situation exists, the use of heavier gauge products is indicated. Materials that provide the necessary superior wearing characteristics include Armstrong Linotile, Heavy Gauge Linoleum, the 1/8″ gauge of Rubber Tile, Custom Corlon Tile, Asphalt Tile, Excelon Tile, and 3/16″ or 5/16″ Cork Tile. For a more complete discussion of resilient flooring gauges, see pages 32 and 33.

Exposure to strong sunlight. The increasing use of glass curtain walls in commercial structures and the enlargement of window areas in homes represent a severe test of any flooring material. Exposure to strong sunlight may affect the performance and appearance of some types of resilient floors by causing fading, shrinking, brittleness, or chalking. Resilient floors in sheet form

(both Armstrong Linoleum and Corlon) and Linotile are considered most resistant to such deterioration.

Pigments are, of course, the limiting factor in the fade-resistant properties of most resilient flooring materials, but great improvement in color stability has been made in recent years, especially when reds and blues are concerned. Neutral colors such as grays and tans show the best light resistance. Pastel tones, especially yellows, reds, and pinks, give the poorest performance in retaining their colorings under prolonged exposure to the actinic rays of sunlight. Cork Tile has the same tendency as natural wood to fade under strong sunlight.

Maintenance. This is often one of the most important factors in the selection of resilient floors for commercial buildings. Maintenance requirements for all types of resilient floors under various service conditions are discussed fully on pages 28 and 29.

Other Factors in the Choice of Resilient Floors

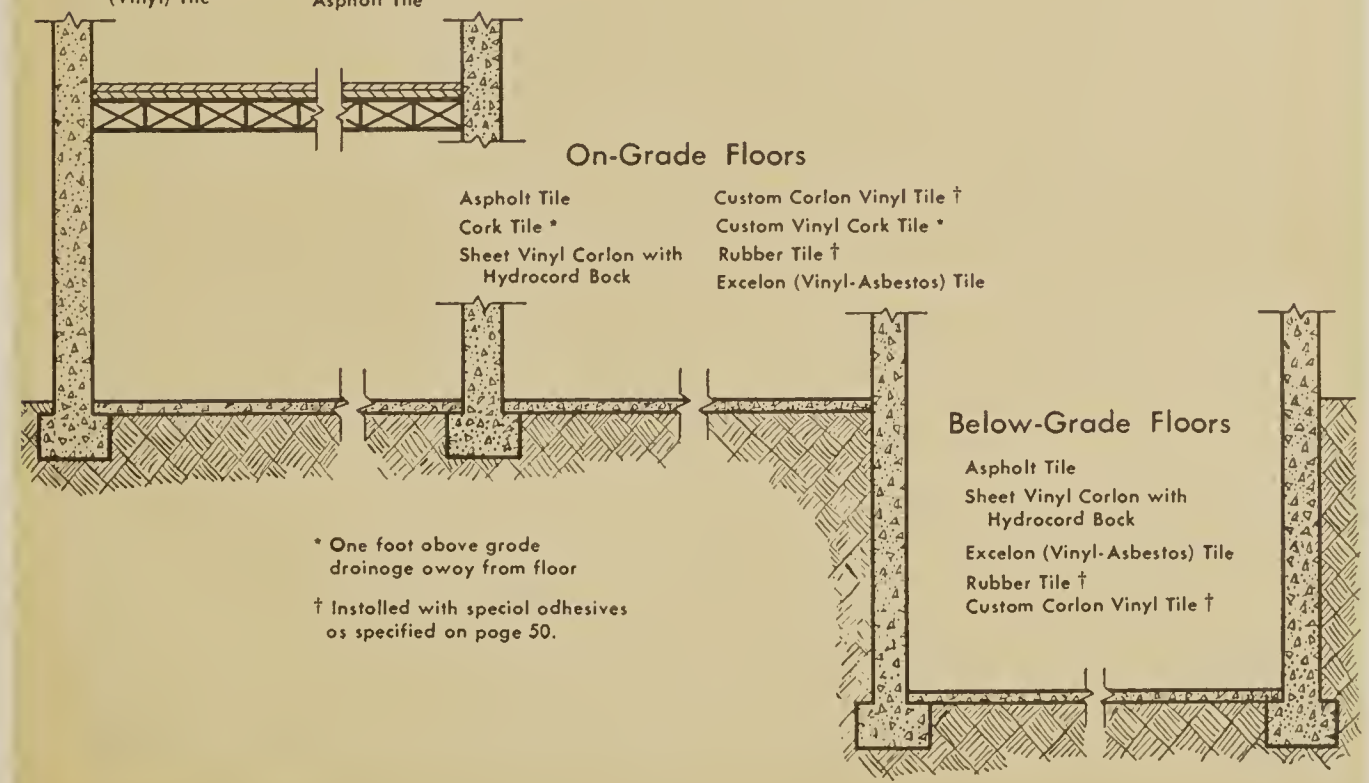
Apart from decorative effects, patterns, and colors, which are largely a matter of individual choice, there are a number of other factors to be considered in selecting a resilient flooring material. Some of the more important are underfoot comfort, noise or impact, electrical conductivity of the floor, ease of repairing damage, and the effect of seams.

Resilience and noise on impact. These considerations are discussed in detail on pages 22 and 23.

Repairing damage. Occasionally, an accident may damage a portion of floor so seriously that replacement becomes necessary. All resilient floors are more easily repaired than marble, terrazzo, or concrete. If the damaged area is small, replacement is easier and less expensive with a tile floor than with sheet goods. However, cuts and tears in Armstrong Corlon (sheet form) can be readily heat-sealed with metal foil and a soldering iron. Linoleum can be patched with lacquer and linoleum mix.

Seams. The small number of seams and joints in sheet flooring allows few places for accumulations of dirt or corrosive materials. Armstrong Resilient Tile Floors are also easy to maintain. Precision factory cutting of all the various types of resilient tiles assures tight joints and close-fitting edges over the entire floor.

Table showing which resilient floors are suitable for installation over various types of subfloors.





Alcoa "Core-free" Home
Denver, Colorado
Floor: Armstrong Custom Corlon Tile
Architect: Charles M. Goodman, Washington, D. C.

Which resilient floor over concrete?

There are at least two reasons why it is now more important than ever to be aware of the particular problems involved in the use of resilient floors for installation over concrete. First, the use of concrete in direct contact with the ground has vastly increased during the past decade. Second, the resilient flooring industry has developed new types of floors and improved others, especially to provide resistance against the harmful effects of alkaline moisture encountered in on- and below-grade concrete subfloors. This alkaline moisture problem is caused by moisture from the earth working its way up through the concrete. As the moisture rises, it combines with the alkaline salts in the concrete. The result is an alkaline moisture surface condition that can deteriorate the resilient floor or the adhesive, unless proper selection is made. The use of lightweight aggregates in any concrete subfloor—suspended, on-, or below-grade—brings up a number of special problems which should be discussed specifically with the local Armstrong representative.

Adequate Drying Time

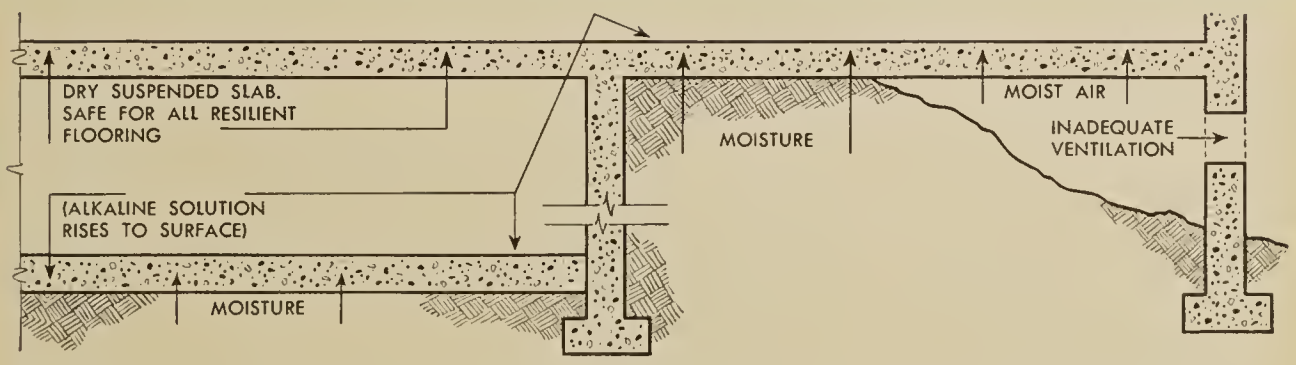
Wherever possible, suspended concrete should be permitted to dry thoroughly for several months. This is especially important when floors susceptible to alkaline moisture are to be installed. In all cases, the concrete subfloor should be tested for moisture before resilient flooring is installed. When suspended concrete is known to be completely dry, any resilient floor may be installed.

A factor which frequently leads to poor adhesion in resilient flooring installations over new concrete subfloors is the use of concrete curing compounds. These compounds create conditions similar to those brought about by "breaker" compounds used in hydraulic-lift and tilt-slab construction. (See page 19.) While these compounds promote better curing of the concrete by retarding moisture evaporation, they present a problem in the installation of resilient floors. Such concrete must be prepared as described on page 19, prior to resilient flooring installation.

Since the degree of moisture present is the main factor determining the seriousness of the alkaline condition, resilient floors which are suitable for installation over concrete in contact with the ground are usually divided into two categories—those which may safely be installed for use on grade or below grade, and those which are suitable for use on grade but not below grade. As is to be expected, the "moisture problem" in basements is more severe than that encountered at grade level.

Below grade. For years, asphalt tile was the only resilient flooring which could safely be installed in basements, and it still remains an excellent low-cost floor for this purpose. Today, Armstrong Excelon (Vinyl Asbestos) Tile is also recommended for below-grade installations, as are Armstrong Rubber Tile and Custom Corlon Vinyl Tile when installed with adhesives as specified on page 50.

In addition to the resilient tile flooring materials recommended for below-grade floors, it is now possible to specify sheet vinyl Corlon with Hydrocord Back for such installations. Neither the vinyl surface nor the Hydrocord Back is harmed by the alkaline moisture in concrete in



This drawing shows how moisture from the ground or from an inadequately ventilated air space below penetrates the concrete slab, bringing alkali to the surface in solution. This solution attacks the oil binders of most resilient flooring materials, causing a chemical change. Linoleum and other resilient flooring materials may be used on dry suspended floors. For grade-level and below-grade floors which contain ground moisture, Asphalt Tile, Excelon Tile, Rubber Tile, Custom Corlon Tile, and Sheet Vinyl Corlon with Hydrocord Back may be installed. These resilient flooring materials are not harmed by alkaline moisture. (Cork Tile and Custom Vinyl Cork Tile also may be installed on grade by following the recommendations on page 18 and the adhesives chart on page 50.)

direct contact with the ground. Thus, sheet plastic flooring can now be used satisfactorily in basement areas.

On grade. Armstrong Rubber Tile and Custom Corlon Tile, as well as Sheet Corlon with Hydrocord Back, may be installed under normal on-grade conditions over cured concrete with special adhesives. See Table of Recommended Adhesives, page 50.

Many years of laboratory tests, and trials under actual conditions, have proved that such installations will give satisfactory service for the normal lifetime of the floor.

Armstrong Cork Tile and Custom Vinyl Cork Tile may be installed over grade level concrete slabs with No. S-214 Waterproof Cement (see table, page 50), if the surface of the slab is at least 12 inches above grade, the ground slopes away from the building, and the slab is well cured and visibly dry.

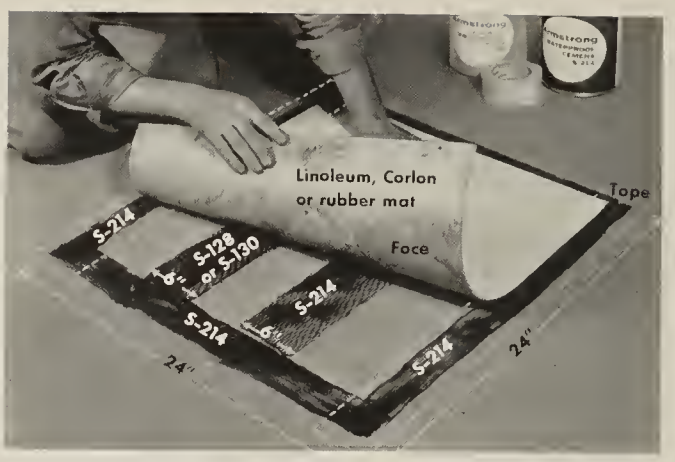
Wet Floor May Appear Dry

It is never safe to assume that a concrete slab will always be dry because it has appeared dry for several years. Rapid evaporation at the surface will make a concrete floor appear free from moisture but when a resilient flooring is cemented to this surface, evaporation is prevented or slowed down and the alkaline solution collects under the flooring material.

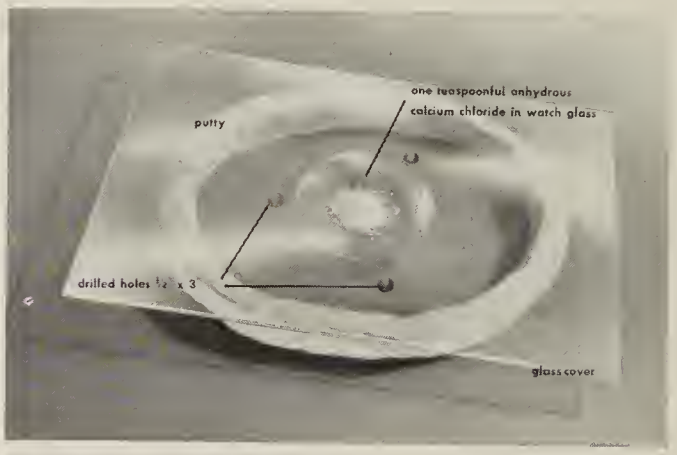
There have been many attempts to find ways to waterproof concrete slabs to make on- and below-grade use of all types of flooring materials possible. To date, the only method which has been proved to work satisfactorily is the membrane method. Even when resilient floorings approved for use without membraning are selected, it is advantageous to include a membrane in slab floors when possible. Individual recommendations for membraning procedures should be discussed with the local Armstrong representative. In any case, it is highly desirable when concrete slabs are in direct contact with the ground, that the slab be placed on a well-drained base.

Regional Conditions

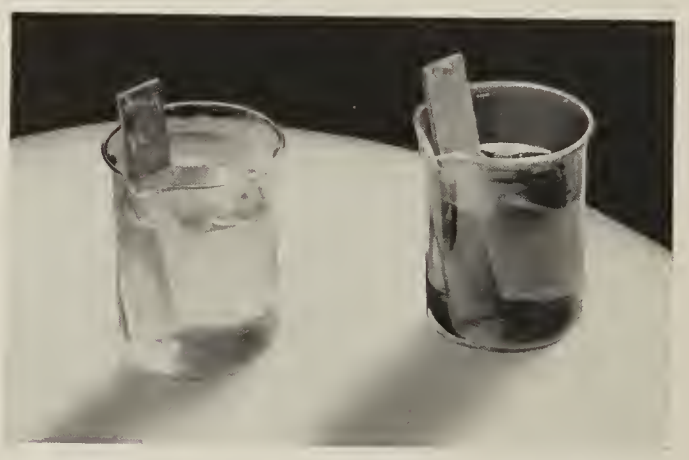
While alkali and moisture present difficulties everywhere, there are a few sections of the country where the aggregates used in compounding concrete contain excessive amounts of alkaline salts. As the subsoil moisture seeps through such concrete subfloors, it dissolves the alkaline salts within the concrete, carrying them to the surface. These salts accumulate underneath resilient flooring or are deposited on the edges of tile as the moisture evaporates. These alkaline deposits build up over a period of time and may gradually force the tiles up from the subfloor or permanently adhere to the surface edges of the tile unless removed promptly. Generally this condition is of a temporary nature and will gradually be eliminated as the continuous passage of moisture dissipates the alkaline salts within the subfloor. An experienced local floor contractor is the best source of useful advice where these special circumstances are encountered.



This test shows whether cork tiles, rubber tile, Custom Corlon Tile, or Sheet Corlon with Hydrocord Back can be installed satisfactorily on or below grade as recommended on page 17. After 72 hours, the S-128 and S-130 adhesives should be partially set up and the S-214 adhesive well set up or dry.



This moisture test should always be made on newly poured suspended concrete floors of all types before the installation of materials that are affected by alkaline solutions. If floor is too moist, calcium chloride is partly dissolved in 24 hours.



Immersion for 2 hours in a 2% solution of sodium hydroxide determines color permanency of pigments in tiles specified for use over below-grade concrete. Beaker at right shows bleeding of colors from pigments that are not alkali resistant.

Hydraulic lift- and tilt-slab construction

Recent improvements in hydraulic lift- and tilt-slab construction techniques have resulted in their increasing popularity with the building trades. However, with the new techniques have come new problems in resilient floor and wall covering installation.

In the lift-slab method of subfloor construction, the concrete for each suspended floor is poured and allowed to harden at ground level before the slab is hydraulically lifted into place to form the upper floor. Before the concrete can be poured, however, a special oily or resinous "breaker" compound is applied to the top surface of each slab to prevent its sticking to the slab above it.

While the "breaker" does prevent the slabs from sticking together, it also prevents resilient flooring materials from adhering satisfactorily to the slab. In most cases, the waxy film of the breaker coating keeps the flooring adhesive from making a firm bond to the slab.

The problem may not be acute in all installations. Job conditions vary. The amount and type of "breaker" used on a slab are just two of the variable factors. In most cases, little trouble has been encountered with Armstrong Asphalt Tile and Armstrong Excelon Tile on lift slabs when installed with asphaltic-type adhesives. Actual job experience has also indicated that breaking compounds tend to deteriorate in a short time, reducing the difficulty. Nevertheless, the only way to insure a permanent bond for any resilient flooring is to remove the waxy film.

Three removal methods can be used. One method is sanding. This is seldom completely successful because it will not get at film that has soaked into the concrete.

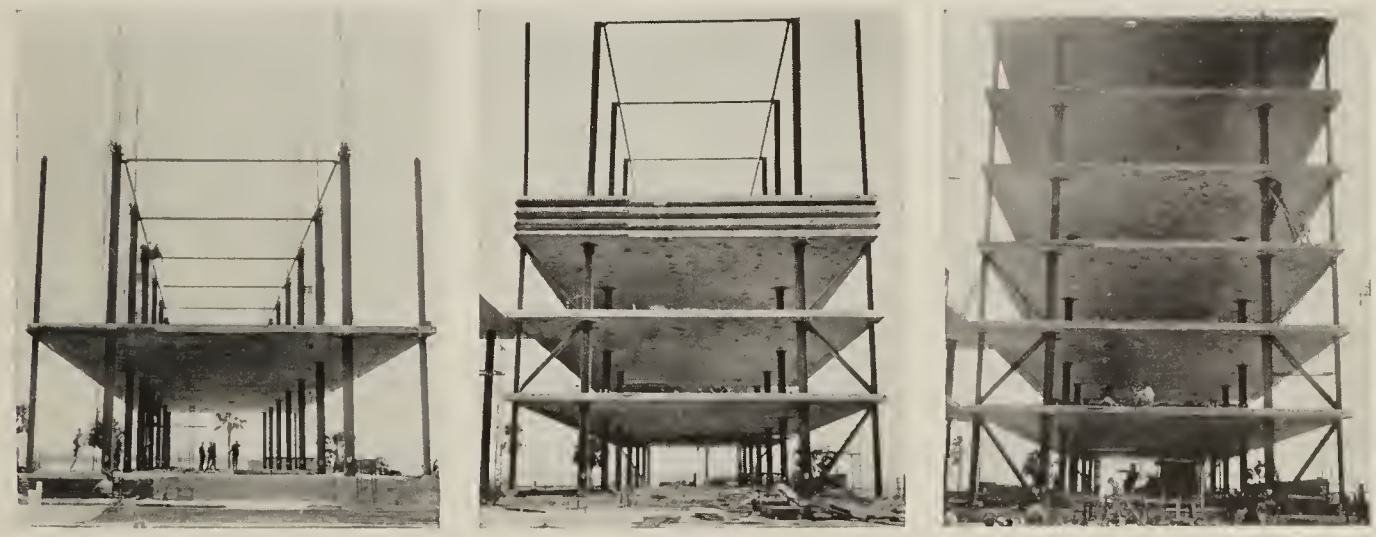
Another method is sandblasting. This will remove the film, but it may also roughen the concrete or pit it if the air pressure is too great or the concrete is too porous.

The best method of removal is grinding the slab with a concrete or terrazzo grinder. Grinding will remove film both on the surface and in the surface pores, and it will cut a new surface on the concrete. In addition, grinding insures a smooth, level floor.

A simple "mat test" should be employed after grinding to check its effectiveness. Lay several test pieces of the resilient flooring to be installed on the concrete bonding them to the slab with the adhesive that will be used when actual installation takes place. After a period of ten to twelve days, check the test installation. If the bond is still strong, the slab is ready for resilient flooring installations.

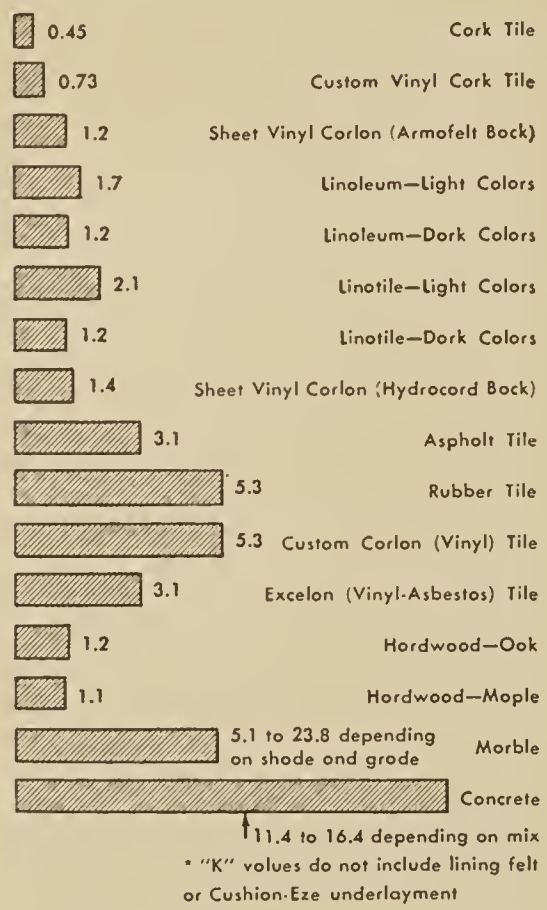
Lightweight Aggregates

Another problem that may be encountered where lightweight aggregate concrete is used in lift-slab or conventional construction is the tendency of some extremely porous concrete mixes to retain residual moisture longer than the normal several months' drying time. When this condition exists, alkaline moisture may collect and rise to the surface of a suspended concrete slab subfloor to create the same moisture conditions found in concrete which is in direct contact with the ground. Whether or not such a condition exists can be determined by employing the moisture tests outlined on page 18. If the concrete subfloor is found to contain residual moisture, only those flooring materials and adhesives with the ability to withstand the effects of alkaline moisture should be considered. In all cases, a 1″ layer of regular concrete should be laid over the lightweight aggregate before resilient flooring installation takes place.



In hydraulic lift-slab construction, concrete slabs are poured directly on top of each other at ground level. The slabs are coated with a "breaker" compound that prevents their sticking together. When resilient floors are to be installed on this type of concrete subfloor, the breaker compound should be removed by grinding to assure proper bonding of the flooring adhesive.

The performance of resilient flooring over radiant-heated concrete subfloors



Conductance is the working value desired for calculation of heat flow. To obtain conductance, divide thermal conductivity by thickness of material. Thus, .125" white Linotile, with a "K-90" factor of 2.1, will conduct 16 BTU's/hour/sq. ft./deg. F. Thermal conductivity of resilient flooring materials varies according to type, color, and installation method. Contact the Armstrong Cork Company for specific recommendations when thermal conductivity is of special importance. The temperature difference between the surface of a radiant-heated subfloor and the surface of the resilient floor (except Cork Tile) will average 2.5°. With Cork Tile floors, the difference is from 9° to 15°.

In order to be able to provide specific and unbiased recommendations for resilient flooring installations over radiant-heated floors, the Research and Development Center of the Armstrong Cork Company has conducted a series of extensive tests since 1944. Under both experimental and on-the-job conditions, observations have been made of the effects of normal and severe floor temperatures on the hardness, composition, and indentation properties of all Armstrong Resilient Floors.

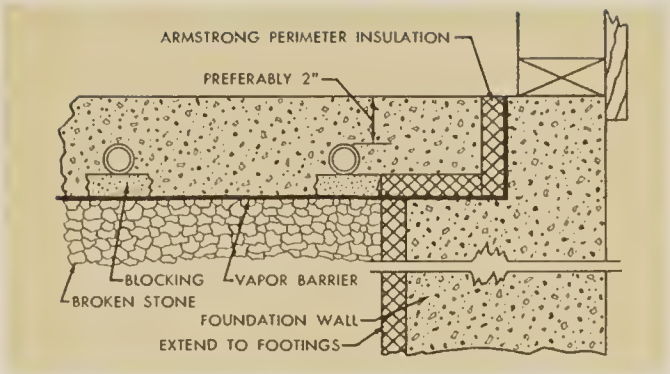
The results of these tests show that there is virtually no loss of heating efficiency through the use of resilient flooring materials. With floors of asphalt tile, Excelon Tile, linoleum, Linotile, Corlon, and rubber tile, temperature difference between the surface of concrete subfloors, commonly used in radiant heating installations, and the resilient flooring surface, is about 2.5 degrees F. With floors of cork tile, which has a thermal conductivity or "k" factor lower than the other resilient flooring materials, the difference is several degrees F. greater. None of these temperature variations, however, is great enough to result in appreciably increased fuel consumption since the time lag required to bring resilient flooring, of the thicknesses commonly used, to the operating temperature of radiant heating systems is insignificant.

No Harmful Effect

The observations of the Armstrong Research and Development Center have also shown that floor heat, within the limits commonly recommended for radiant heating, has no harmful effect on either the resilient flooring or the adhesives used in installation, provided that the temperature of the floor is kept at a level below 85° F. However, if the subfloor is heated during the installation of the resilient flooring, the working time will be more limited. This is due to the faster setting of the adhesive when it is applied to a warm subfloor.

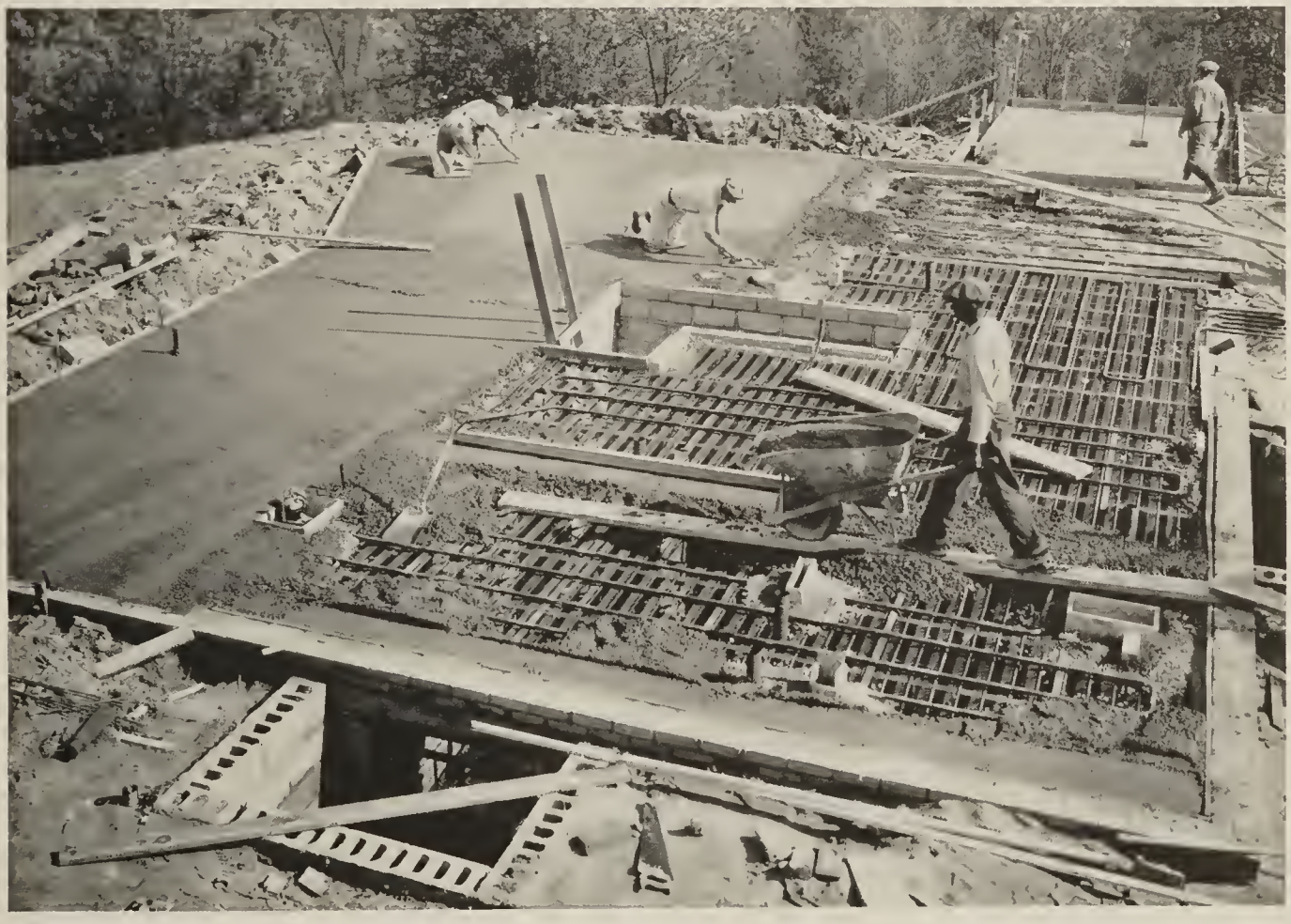
Both laboratory tests and actual field experience indicate that resilient flooring materials can be chosen for radiant-heated subfloors by exactly the same standards as those where other types of heating are employed. Each type of resilient flooring material is installed over a radiant-heated subfloor with the same adhesives and in the same manner as recommended for conventional floors. It should be noted in this connection that the use of radiant heating does not change the limitation that only certain types of resilient floors may be installed over concrete slabs in direct contact with the ground. (See pages 17 and 18.)

The American Society of Heating and Air Conditioning Engineers has established 85° F. as the maximum surface temperature for radiant-heated floors. Floor temperatures higher than this are considered uncomfortable underfoot. Because of their thermoplastic quality, asphalt tile and plastic asbestos tiles become slightly softer, and indent more easily, when radiant heating temperatures run above normal. The usual measures used to protect resilient flooring against indentation, described on page 29 of this book, are adequate to prevent indentation in Armstrong Asphalt Tile or Excelon Tile when floor temperatures do not exceed this standard 85° F. maximum.



Section through a floor panel using Armstrong Perimeter Insulation. Note that the insulation extends around the edges of the slab in contact with all the exterior foundation walls.

Certain characteristics of radiant heating systems as recommended by the American Society of Heating and Air Conditioning Engineers have an important bearing on maintaining comfort during cold weather without requiring floor temperatures above 85°. These are adequate perimeter insulation for the slab, appropriate insulation of the building, and reasonably low infiltration. The pipe grid layout should give adequate coverage without excessively high water temperatures, and the spacing of pipes should be such that there is a minimum of temperature variation between the area directly above the pipes and the area above the space between them. While none of these design features is within the appropriate scope of Armstrong recommendations, each factor has been carefully considered by the Armstrong Research and Development Center in evaluating its test results. When these standards are used as the basis for the design of radiant heating systems, Armstrong Resilient Floors may be installed with assurance of the same excellent performance they have demonstrated in other applications.



This photograph shows the final construction stage of a radiant heating installation. The method of perimeter insulation described in the figure above is being used. The pipe circuit is closed and tested under pressure before concrete is poured.

The comparative resiliency of floors

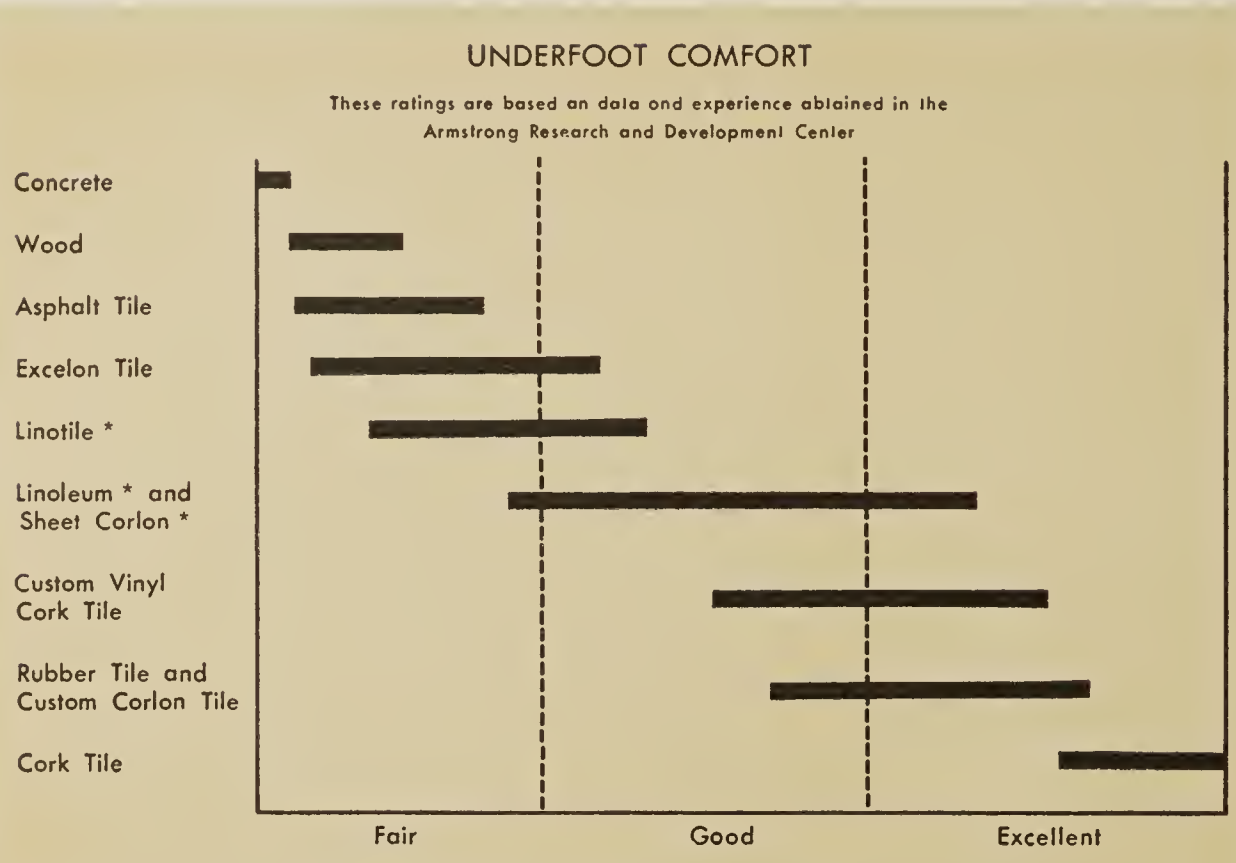
Technically speaking, resilience is a property involving the elastic energy inherent in a material which causes it to regain its original shape when an external load is withdrawn. For practical purposes, however, the resilience of a floor, in its broadest sense, affects more than its properties of recovery from indentation, important though these may be.

For the purposes of this article, resiliency is treated in the more comprehensive sense—as affecting underfoot comfort, and the noise generated by foot traffic, as well as the floor's resistance to or recovery from indentation by foot traffic and other short-term loads.

Recovery from indentation. In assessing the resilience of any particular flooring, the momentary indentations involved in walking are those which are of primary importance. These pressures are quite high—often as much as several thousand pounds per square inch when contact is first made with the floor under the edge of the heel.

The method ordinarily used for measuring a floor's resilience is the measurement of its recovery from short-term indentations. Such measurements are, of course, of great practical assistance in the selection of suitable resilient flooring — especially for heavy traffic areas. However, the standard testing procedures required by Federal Specifications for different types of flooring materials vary significantly. Therefore, no direct numerical comparison of the short-term indentation characteristics of various types of resilient floors can be made.

Inability of a floor to recover from the indentation caused by temporary loads will also cause the floor to present



NOTE—The spreads shown are based on differences in felt underlayments and gauges.

* The use of Cushion-Eze Underlayment (See page 24) with these flooring materials greatly increases their resilience and underfoot comfort.

an irregular and unsightly surface and to become difficult to keep clean.

Static Load Limits for Armstrong Resilient Floors

Type of Flooring	Load Limit Lbs. per Sq. Inch
Asphalt Tile and Excelon Tile	25
Cork Tile	75
Custom Vinyl Cork Tile	125
Linoleum and Corlon (all forms, all backings)	75
Linotile, Rubber Tile, and Custom Corlon Tile	200

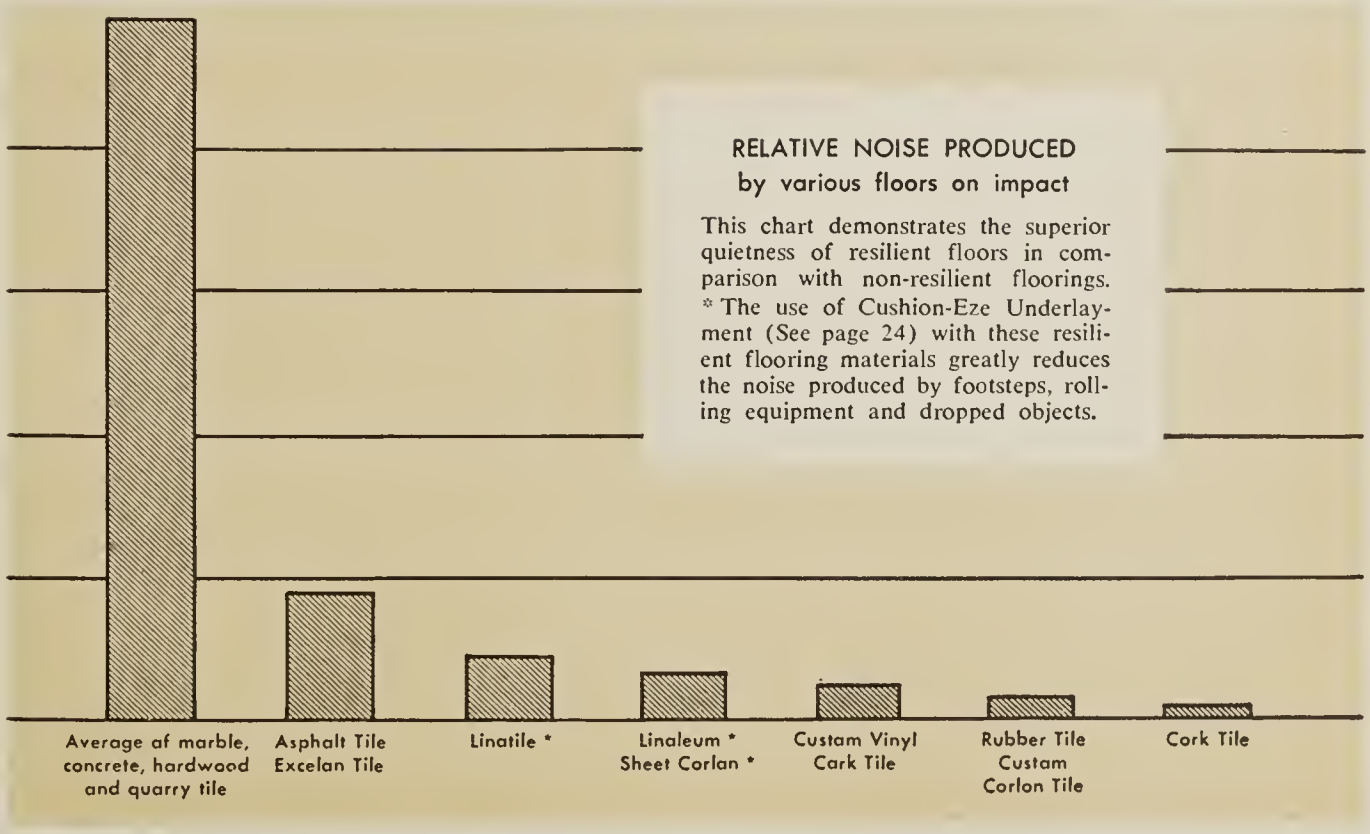
The table above indicates the maximum safe load limit on Armstrong Resilient Floors before the material becomes permanently indented. These figures are the results of indentation tests conducted by the Armstrong Research Laboratories and are used as a basis for computing the area of bearing surface of Armstrong Furniture Rests. These Furniture Rests and Cups are recommended to eliminate excessive indentation in resilient flooring caused by heavy static loads. See page 29 for recommendation of furniture rests.

Underfoot comfort. While this is an important consideration in the selection of floors in any building, it becomes a vital factor in the many areas where prolonged periods of walking or standing tend to cause fatigue. Retail stores, hospital corridors, restaurants, and residential kitchens are obvious examples of types of locations where the efficiency of people may be seriously affected by comfort underfoot—and where the choice of the right floor may help considerably to reduce fatigue and increase efficiency. The accompanying chart (page 22) has been prepared by the Armstrong Research and Development Center for the purpose of helping to ascertain the relative "comfort" of all types of resilient floors. It must be emphasized that this chart is relative rather than absolute, since underfoot comfort is affected by factors other than the composition of the floor itself—such as the underlayment and adhesive used in the installation of the flooring material.

Quietness. With the public more aware of the disturbing effects of noise than ever before, the reduction of sound from floor traffic becomes increasingly important. The impact of footsteps on hard floors is a common source of annoyance—and in areas such as corridors, where the sound tends to reverberate through adjoining rooms, impact noise can become a very serious problem.

Resilient floors, because of their composition, give under the impact of footsteps, dropped objects, and rolling wheels. This cushioning effect actively reduces traffic noise. All types of resilient floors rate well as "low noise producers" in comparison with concrete or marble. Their relative noise-on-impact qualities are shown below.

It should be remembered that, while resilient floors will soften the sound of foot traffic, they will not appreciably subdue noise originating from other sources. "Sound conditioning"—or the absorption of noise such as the clatter of typewriters, kitchenware, and conversation—can best be accomplished by the use of acoustical materials. Neither resilient floors nor acoustical materials stop the passage of noise through the building structure. The use of Armstrong Cushion-Eze Underlayment does, however, tend to reduce the transmission of the noise of footsteps through the floor and ceiling to the rooms below.



RELATIVE NOISE PRODUCED
by various floors on impact

This chart demonstrates the superior quietness of resilient floors in comparison with non-resilient floorings. * The use of Cushion-Eze Underlayment (See page 24) with these resilient flooring materials greatly reduces the noise produced by footsteps, rolling equipment and dropped objects.

Cushion-Eze Underlayment

A new development created and developed through Armstrong research brings an entirely new concept of underfoot comfort and quietness to many types of resilient floors. In addition, it makes possible the installation of new resilient floors over existing linoleum and other resilient floors in remodeling projects.

Carrying the trade-marked name of Cushion-Eze Underlayment, this new Armstrong lining material for resilient floors consists of a cushioning layer of air-filled foam fused to a topping of felt. It provides a thick, springy cushion that absorbs the impact of footsteps and reduces the sound of rolling equipment and dropped objects. In residential and other light construction, Cushion-Eze Underlayment also helps sound condition residential and light commercial interiors by reducing noise transmitted through the floor to areas below.

Cushion-Eze Underlayment can be specified for use on all types of suspended floors with linoleum, sheet vinyl Corlon and Linotile. It is not recommended for on- or below-grade floors and is not recommended for use under asphalt tile, vinyl asbestos tile, homogeneous vinyl tile, rubber tile, or cork tile.

The foam construction of Cushion-Eze Underlayment absorbs the movement of the boards in wood subfloors and tends to conceal minor irregularities in the subfloor. It takes the place of conventional lining felt. No special adhesives are required for the installation of Cushion-Eze Underlayment (see chart, page 50).

Simplifies maintenance. Because Cushion-Eze Underlayment allows the flooring surface to "give" gently under impact, it minimizes the possibility of dirt and grit being ground into the floor. Thus, resilient flooring installed over Cushion-Eze Underlayment is easier to clean and more resistant to scratches and marring than similar floors installed direct or over lining felt.

Simplifies remodeling. Cushion-Eze Underlayment can be installed right over existing suspended resilient floors, except asphalt tile and vinyl asbestos tile. Thus, it makes replacement of many resilient floors faster and less inconvenient than by traditional methods requiring the old flooring to be ripped up, sanding the subfloor or nailing down hardboard. In remodeling, however, the existing resilient floor must still be firmly bonded to the subfloor. Before installing the new resilient floor with Cushion-Eze Underlayment, the surface of the existing resilient floor requires only a light sanding to remove the coating of wax and dirt.

Moderate cost. The use of Cushion-Eze Underlayment adds relatively little to the cost of the resilient floor installation. It is considered an exceptional value for its increased comfort and quietness as well as for its contribution to lower maintenance costs. In remodeling, it can mean a real saving where the existing resilient flooring need not be removed.



Cushion-Eze Underlayment can go down over existing resilient floor, as in upper photo. Floor is ready for new linoleum installation, lower photo, without additional preparation.





Monsanto "House of the Future"
Anaheim, California

Floor: Prototype of Armstrong Vinyl Corlon, Futuresq Series,
with Cushion-Eze Underlayment

Architects: Richard W. Hamilton and Marvin E. Goody

Grease and alkali resistance of resilient floors

In commercial or residential installations, resilient floors may be subjected to three main sources of contamination from grease and alkalis. Contamination may be momentary, such as spilled grease, solvents, or alkalis, which are promptly wiped up. Such short-time contamination presents no problem if the floor has a coating of wax, the cleaning is thorough, and the grease or alkali has not seeped down between joints or seams in the floor. Of greater problem is contamination that is more prolonged —generally by contact with milder concentrations of oil, grease or alkali from cooking residue, spillage, kitchen vapors, strong cleaners, or improper maintenance. The third usual source of contamination is the alkaline moisture from the earth passing through grade-level and below-grade concrete. The problems encountered under this alkaline moisture condition are described in detail in the section, "Which resilient floor over concrete," pages 17 and 18.

The Armstrong Research and Development Center devotes continuing attention to developing materials with improved grease and alkali resistance for a wide variety of conditions to which floors may be subjected. The objective is to produce flooring materials which will not soften, swell, discolor, or change their physical properties under normal, accidental, or even prolonged contact with grease and alkalis.

Testing

Laboratory tests are performed on resilient flooring materials with three considerations in mind. First, the tests must establish the degree of resistance to grease and alkalis of the various floorings made. Secondly, comparisons must be made of the various grades of each type of flooring. And thirdly, the information arrived at must be applied to the experimental production of new types of resilient flooring, and these, in turn, must be tested.

Although this has been a subject very important to the flooring industry and one on which much work has been done, practically no standard test has been generally accepted in the trade.

There are now, however, a number of accurately controlled testing procedures, in the development of which Armstrong has played a major part. These have given rise to the following uniform terms which can be used as a guide in the choice of a resilient floor.

Grease resistant—flooring for residential use, and tested in vegetable oils.

Greaseproof —flooring for residential and commercial use, and tested in mineral as well as vegetable oils.

Armstrong Testing Procedures

In the Armstrong Research and Development Center, the grease-and-alkali problem has been under study for many years, and several tests have been developed that produce valuable results.

How well laboratory tests conducted in the Armstrong Research and Development Center have correlated with actual behavior in the field is evidenced by the fact that Armstrong has developed a number of flooring materials with good to excellent grease and alkali resistance. However, claims made during the past few years for various "plastic" floorings have accentuated the need for sharper distinctions in testing methods. In fact, some of these tests which Armstrong has used in the past are no longer precise enough to evaluate the grease and alkali resistance of the various grades of plastic-type flooring materials now being offered.

Armstrong Abrasion Tester. The Armstrong Research and Development Center has developed an improved

method of determining grease resistance by using the Armstrong Abrasion Machine. The technique used with this equipment permits a quantitative determination of the grease resistance of the flooring material by measuring the abrasion resistance before and after contamination with grease or oil. For floorings with burlap or felt backing, contamination is measured for the surface only. Homogeneous flooring materials, such as asphalt tile and rubber tile, however, can be totally immersed and then tested by means of the Abrasion Machine.

The Abrasion Machine provides a means of accurately and quantitatively assessing the effects of greases and oils. Because the machine is capable of testing eight samples of different materials at the same time, it supplies useful comparative data.

Immersion testing of Armstrong floorings. Immersion testing procedures for various types of floors measure the effects of prolonged exposure to grease or oils. In these continuing tests, materials are immersed for periods as long as several years while being continually observed for signs of deterioration.

At present Armstrong Linotile and the greaseproof tiles are virtually unaffected by the total immersion tests for grease-oil resistance, and Armstrong Rubber Tile is only slightly softened. Although extremely severe, this test has great value because various materials are equally exposed to grease and oil for long periods of time.

Tests lead to product improvements. Armstrong testing procedures have led to steady improvement of the grease- and oil-resistant properties of various types of Armstrong resilient flooring materials.

Armstrong Rubber Tile is now recommended for domestic kitchens. Both Rubber Tile and Armstrong Custom Corlon Tile may be installed below grade if Armstrong No. S-104 Chemical-Set Waterproof Cement is used, and on grade with No. S-235 Cement or S-104 Chemical-Set Cement (see chart, page 50). Excelon Tile, a vinyl-asbestos tile, has been developed to provide exceptionally high resistance to both grease and alkali. Regular Asphalt Tile has low grease resistance, but is highly resistant to alkali. Greaseproof Asphalt Tile also retains good alkali resistance. Sheet Vinyl Corlon and Custom Corlon Tile (homogeneous vinyl) are exceptionally resistant to the harmful effects of both grease and alkaline solutions. Even more recently, Sheet Vinyl Corlon with Hydrocord Back has been developed to provide a sheet plastic flooring with excellent resistance to alkaline moisture from the earth as well as to surface grease and alkalis.

The qualitative resistance of Armstrong floorings is shown in the accompanying table. These flooring materials should be selected for specific installations according to the degree of surface alkali or grease resistance required.

Grease-alkali resistance chart

SURFACE GREASE RESISTANCE

SURFACE ALKALI RESISTANCE	Poor	Fair	Good	Excellent
Excellent	Regular Asphalt Tile (A & B colors)	Regular Asphalt Tile (C & D colors)		Sheet Vinyl Corlon Custom Corlon Tile Excelon Tile Custom Vinyl Cork Tile
Good			Rubber Tile	Greaseproof Asphalt Tile
Fair		Cork Tile		
Poor				Linoleum Linotile

Maintenance of resilient floors

Although the care of resilient floors often is believed to be outside the province of the architect or builder, serious problems can arise when maintenance is not taken into consideration in the selection of the flooring material. This is particularly true when the owner of a building is uninformed and proceeds with his own ideas of floor maintenance to the point where the floor is ruined. Maintenance requirements should be considered along with the type and amount of traffic to which the floor will be subjected. Excessive, uneconomical maintenance may result if an unsuitable floor is installed.

Armstrong representatives are always ready to offer any follow-through that may be needed to make certain that the owner of a new floor understands the maintenance required for its most satisfactory service.

Apart from their handsome appearance, one of the main reasons for the popularity of resilient floors is their ease of cleaning. They never need costly refinishing. Occasional washing and waxing, along with regular sweeping, are all the maintenance they normally require. However, resilient floors vary in the amount of care they need. For this reason, the easiest to maintain floors should be selected for areas, such as entrance ways, where service conditions are most severe.

In order to retain a lustrous finish, and to provide the added protection that waxing affords, Armstrong has always encouraged occasional careful applications of a high-quality wax, after washing, as the proper care for plastic floors of all kinds.

Since the maintenance characteristics of the different types of resilient floors overlap, and maintenance is also affected by the color and pattern of the flooring selected, the following ranking is intended as an approximate guide to the maintenance required by various Armstrong Floors. Those rated "Superior" normally require the least care.

Superior Linotile
Excelon Tile (Vinyl-Asbestos)
Custom Corlon Tile (Homogeneous Vinyl)
Custom Vinyl Cork Tile
Any Resilient Floor with Cushion-Eze Underlayment (see page 24.).

Linotile is considered the easiest to maintain of all the Armstrong Floors. Its dense, tough composition makes it an excellent choice for heavy-traffic areas. Both Excelon Tile and Custom Corlon Tile are vinyl plastic floors with exceptional maintenance advantages. Both provide unusual resistance to the harsh cleaners which are all too often used in spite of manufacturer's warnings.

Minimum maintenance is required for Armstrong Custom Vinyl Cork Tile because of its vinyl protection. The use of Cushion-Eze Underlayment with linoleum, sheet vinyl Corlon, and Linotile (see page 24) makes the floor easier to maintain because the foam underlayment keeps dirt from being ground into the surface of the flooring.

Excellent Sheet Vinyl Corlon
Linoleum

Linoleum perhaps best typifies the years of popularity which resilient flooring materials have enjoyed for their ease and economy of maintenance. Regular sweeping and occasional washing and waxing are all that are required to keep linoleum in good condition. Armstrong Corlon, a sheet-type plastic flooring, offers the additional advantage of excellent resistance to common chemical reagents.

Good Rubber Tile
Asphalt Tile

The smooth plate finish of rubber tile requires slightly more frequent maintenance than the floors described above if it is desired to retain the high gloss which adds so much to its beauty. Rubber tile also benefits from occasional buffing with No. 00 steel wool. This keeps the rubber in prime condition and helps preserve the finish. For its low cost, asphalt tile provides a floor that is remarkably economical to maintain. Careful cleaning and periodic waxing, especially in the first months after installation, will help assure easy maintenance.

Fair Cork Tile

Regular cork tile, without the vinyl protection as in Custom Vinyl Cork Tile, is not ordinarily recommended for heavy traffic areas and should not be installed where it will be subjected directly to tracked-in dirt. In areas of less severe traffic, cork tile is readily maintained by daily sweeping and occasional washing and waxing. In cases of excessive soiling, machine scrubbing or sanding and refinishing may be necessary.

The following recommendations for resilient floor care are the result of continuing research over many years.

Sweeping. Dirt tends to slip off easily from the smooth, lustrous surface of any resilient floor. Daily sweeping with a soft broom or dry mop will keep this type of flooring clean for long periods. Oil mops or oil-type sweeping compounds are not recommended.

Washing. "More floors are washed away than worn away," says an old adage in the flooring industry. Unless they are subjected to unusual amounts of dirt, resilient floors should be washed thoroughly only two or three times a year. However, it is good practice to clean the floor lightly every week or two using a very dilute solu-

tion of Armstrong Cleaner (one-half cup to a pail of warm water) to remove surface dirt. Armstrong Cleaner, manufactured especially for resilient floors, is recommended for all types of floors. New resilient floors should not be washed until the adhesive is thoroughly set—a period of at least four or five days for all resilient floors.

Waxing. After a resilient floor has been thoroughly cleaned and as often as needed after routine cleaning, it should be waxed. Most people have a tendency to use too much wax. A thick film of wax forms a crust on top, leaving a soft, gummy mass underneath. Dirt penetrates the crust and lodges in the soft wax, making the floor appear gray and dirty. It is much better to apply two thin coats than one thick coat.

Paste waxes, which contain solvents such as naphtha or turpentine, should never be used on asphalt or rubber tile. The ideal wax for all resilient floors is a water-emulsion type such as Armstrong Linogloss Wax, which dries in less than 20 minutes to a hard, colorless finish that is lustrous but not shiny. Linogloss Wax is made especially for resilient floors. Armstrong Wax Clean also is excellent for maintaining all types of resilient floors. Resilient floors should never be treated with lacquers, varnishes, or similar finishes.

Stain removal. The adjoining chart shows suggested methods of removing stains from all types of Armstrong Resilient Floors. It does not cover all types of blemishes, and the methods outlined may not remove all stains. Armstrong will gladly advise on any stain problem for which these methods do not prove fully effective.

Protection. An element in the care of resilient floors which is often overlooked, but which is absolutely necessary to retain the floor's beauty, is the use of furniture rests. The function of a furniture rest is simply to extend the area over which the weight of furniture loads is distributed, and thus prevent indentation.

Type of stain	Type of floor			
	Linoleum Linotile Corlan	Asphalt Tile Excelan Tile Custom Vinyl Cork Tile	Rubber Tile Custom Corlan Tile	Cork Tile
Alcohol	2	1	2	2
Acids Alkalis Burns Drain Cleaners Ink Iodine Lye Mercurochrome Metal Nail Polish	3	3	3	3
Chewing Gum Paint Varnish Tar	4	4	4	4
Dry Cleaners Fruit Juices Grease Shoe Polish	1	3	3	1
Rubber Heel Marks	3 or 5	3	3	3 or 5

Methods of removal

1. Wash with Armstrong Cleaner, rinse, dry and wax.
2. Rub with No. 0 dry steel wool, rinse, dry and wax.
3. Rub with No. 0 steel wool dipped in Armstrong Cleaner, rinse, dry and wax.
4. Remove with putty knife, rub with No. 0 steel wool dipped in Armstrong Cleaner, rinse, dry and wax.
5. Rub lightly with cloth dipped in paste wax. Buff.

Recommendations for the selection of Armstrong Furniture Rests

Weight of fully loaded furniture	size of rest or cup required (specify by number) Sheet Corlon and Linoleum	Linotile	Excelon, Asphalt Tile	Custom Corlon, Rubber Tile	Cork Tile
Up to 50 lbs. per leg	NT-10 CT-100 CFT-300 CFT-301	NT-10 CT-100 CFT-300 CFT-301	NT-20 CT-200 CFT-400 CFT-401	NT-10 CT-100 CFT-300 CFT-301	NT-20 CT-200 CFT-400 CFT-401
50-100 lbs. per leg	NT-20 CT-200 NDC-6 CFT-400 CFT-401	NT-10 CT-100 NDC-6 CFT-300 CFT-301	NT-50 CT-500 NDC-7	NT-10 CT-100 NDC-6 CFT-300 CFT-301	NT-35 CT-850 NDC-6
100-150 lbs. per leg	NT-20 CT-200 NDC-6 CFT-400 CFT-401	NT-10 CT-100 NDC-6 CFT-300 CFT-301	NDC-225	NT-10 CT-100 NDC-6 CFT-300 CFT-301	NT-50 CT-500 NDC-7
150-200 lbs. per leg	NT-35 CT-350 NDC-6	NT-10 CT-100 NDC-6 CFT-300 CFT-301	NDC-325	NT-10 CT-100 NDC-6 CFT-300 CFT-301	NT-50 CT-500 NDC-225
200-250 lbs. per leg	NT-35 CT-350 NDC-6	NT-20 CT-200 NDC-6 CFT-400 CFT-401	NDC-325	NT-20 CT-200 NDC-6 CFT-400 CFT-401	NDC-225
250-300 lbs. per leg	NT-50 CT-500 NDC-7 NDC-125	NT-20 CT-200 NDC-7 NDC-125 CFT-400 CFT-401	NDC-325	NT-20 CT-200 NDC-7 NDC-125 CFT-400 CFT-401	NDC-325



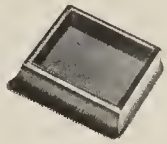
CFT Chrome Furniture Type



NT Nail Type



CT Cotter Type



NDC Cup Type

Light reflectivity

Today, there is a growing awareness on the part of industry, education authorities, hospitals, and other institutions—and even the home owner—of the effects of the brightness and quality of light. As a consequence, the light reflectivity factor of resilient floors takes on additional importance. This is particularly true in view of the fact that the floor is often the largest single area of decorative color in an interior.

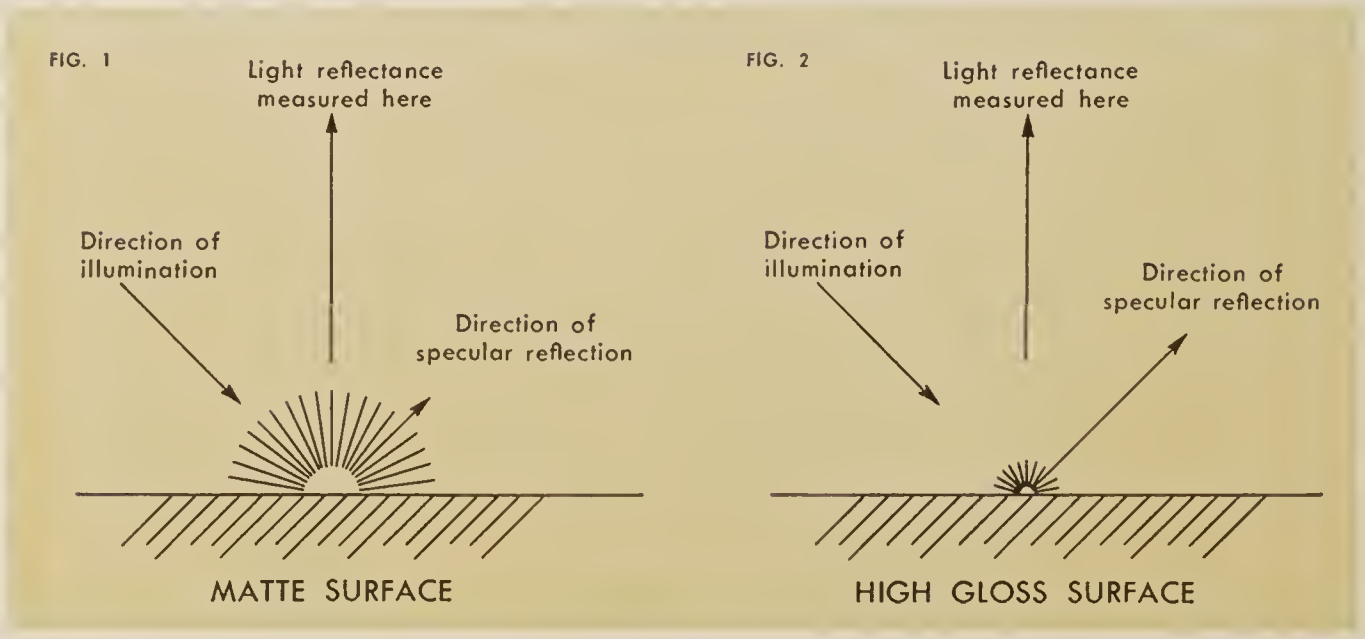
The percentage of incident light reflected by a floor—or any other decorative medium—must be adjusted to take into consideration the fact that the human eye is more sensitive to some colors than to others. A person with normal color vision is most sensitive to a wave length of about 570 millimicrons—a greenish yellow in approximately the middle of the visible spectrum—and sensitivity falls away toward both the red and violet end of the spectrum. The accompanying table of light reflectivity values of various types of resilient flooring is therefore weighted to take this eye-sensitivity into account.

In addition to color, gloss also has some effect on the light reflectivity of a material—a high gloss sample will have a lower light reflectance. This is illustrated below.

In Fig. 1, a matte surface reflects light in all directions but, as shown in Fig. 2, a high gloss surface reflects most of the light in the direction of specular reflection and a relatively small amount in the direction in which the light reflectance measurement is made. If this material is viewed at the angle of specular reflection, it will appear very bright, but what will be seen will be a more or less distinct image of the source of illumination combined with light reflected by pigment particles of the material. Therefore, the colors in a high-gloss waxed and polished floor will appear somewhat darker than the same colors in a material with a matte finish. This is especially true of the darker colors. For example, the black in Armstrong Custom Corlon Tile, Pattern No. 462, Imperial Black, with its high gloss, appears to be much darker than the black in Ebony Asphalt Tile, No. B-905, which has a low gloss surface.

Apart from its effect on the light level of the room, gloss has a considerable influence on the appearance of the finished floor. Very glossy flooring materials tend to show up minor irregularities in the subfloor surfaces. Imperfections that may not be noticeable in the bare subfloor become obvious when the resilient floor has been installed. *Very glossy materials, therefore, require careful subfloor inspection and preparation in order to insure the best appearance. Extra maintenance care also is required.*

Since the great majority of resilient floors are made of combinations of different colors, the light reflectance figures shown on the chart are average values based on a large area of the pattern. These values range from a high of 61.6% for Plain White Custom Corlon Tile to a low of 1.8% for Plain Black Custom Corlon Tile. In rooms where the light reflectance of the floor is important, practically any value can be obtained by choosing from the various types of Armstrong resilient floors.



LIGHT REFLECTIVITY VALUES OF ARMSTRONG RESILIENT FLOORS AND WALLS

	Linoleum						Resilient Tiles				Plastics			Walls
Light Reflectivity in %	Plain No.	Decoray and Jospé Sheet and Tile, Parquet Tile No.	Textelle, Royelle & Marbelle No.	Imperial No.	Craftline & Embossed No.	Spatter Linoleum No.	Asphalt Tile No.	Linotile No.	Rubber Tile No.	Cork Tile & Custom Vinyl Cork Tile No.	Sheet Corlon No.	Custom Corlon Tile No.	Excelon Tile No.	Plastic Surfacing, Vinyl Wall Tile
70 to 50	23		1556	1602 1608		5029		153			6180 6184 6212 6214 6511 6202 6200 6507	1414 1412 475 1400 1407 1460	731	8601 8602 8604 8501 8502 8504
50 to 45	48		015	1606	5170 5151	5000 5030		156 171 191	609 636 653 651		6502 6506	460 476	748	8606
45 to 40		1803 1810 1891	1503	1604	5580 5571 5551 5390 5581 5394 5541 5550 5171			174			6183 6301 6201 6505	1411 1413 1402	735	8503 8505 8506 8507 8603 8605 8607
40 to 35		1814	1508 1523 030	1607	5540 5150 5161 5512 5113	5007	D-911	178	664		6181 6300 6320 6510 6205 6204 6503	472 474 1403 1405 1409	766 767 749 746 770 776 703 704 705	
35 to 30		1800	1553 09	1600 1601 1605	5353 5160 5510 5520 5110	5018 5025 5026 5028	C-989 C-921 C-920 D-900 C-926 D-970 974	152 176 183 154	632 633		6187 6321 6340 6216 6203 6508		736 740 747 702 701 700 733 761 762 771 788	
30 to 25	45 24	1870 1840 1865 1802 1806 1807 1813 1890	03 014 018 042 1500 1501 1516 1552	1603	5300 5351 5393 5511 5793 5796	5004 5019	C-901 C-991 C-993 D-953	170 151	610 611 637 656		6185 6186 6207 6341 6504	461 467 469 471 1408	737 760 779 780 783 798 734	8508
25 to 20	50	1869 1841 1804 1871 1815	036 1509 1521 1550 1555		5310 5500 5501 5792	5014	C-944 C-947 975	150 169 173 185 187 155	631 652	410	6213 6509	1404 1406	763	
20 to 15		1867 1866 4 13 1801 1842 1817 1895 1896	08 1551 1554		5570 5530	5022	C-903 C-946 C-995 C-971 C-961 C-902	186 189 190		1005 1006	6208 6215	1410	744 769 768 765 777 789 797	
15 to 10	22 34 39	1843 16 1868			5321 5352 5521	5024	C-907 976 C-997 D-964	157 172 175 177	635			477	739 796 800 786	8600
10 to 05	20 25	1816 1	029				A-200 8-905 8-919 C-924 8-922 8-923 8-992 B-994		665		6182	1401	772 799 732	
05 to 00	21 27		021				A-210 8-918	180	613 649 695	411		462 1461		8500

Gauges of resilient flooring

The most obvious reason for concern with the gauge or thickness of a resilient floor is its effect on the length of service it will give. Once this was the most important factor in the selection of flooring. Until a few years ago, American gauges closely followed the thicknesses of those made in Europe. There, construction was expected to last for centuries, and demanded the thickest gauges that could be produced, with little or no heed to the cost of such materials. "Battleship" linoleum, for instance, meant 3/16″ or thicker, and was actually made in both ¼″ (0.250″) and occasionally 8 mm. (0.315″) to special order.

Today, as a result of long experience in the resilient flooring industry, modern manufacturing methods and improved materials have been developed, imparting vastly superior qualities of durability—and far greater economy. Gauges which were once regarded as being too "light" for satisfactory performance now appear more than adequate for most residential and commercial areas. Furthermore, with the modern trend toward frequent redecoration, durability has become a somewhat less important consideration, as flooring is often replaced to create a change in interior decoration when far from worn-out.

There are, however, other properties of resilient flooring that are affected by its gauge . . . notably appearance and comfort. The thicker the gauge, the better the resilient floor hides subfloor irregularities, and the better the appearance. The floor's comfort value and quietness also increase with the gauge.

Resilient Tiles

In the case of homogeneous, unbacked tile floors, gauges exceeding ⅛″ are seldom used except in commercial installations where maintenance and traffic conditions are extremely severe. In any flooring installation, of course, it is necessary to take into consideration factors other than gauge. In choosing a flooring material, the proper *composition* for the type of service it will undergo must be decided *first*. Then the gauge of that material is considered. From the point of view of durability, the thinner gauges of the chosen composition will meet most requirements where the amount of maintenance is expected to be reasonable. But if quietness and comfort are of major importance, thicker gauges should be chosen.

For locations where poor maintenance or severe traffic conditions are involved, the thickest available gauge in the correct flooring material should be chosen. There are some compositions of tile such as Linotile, in which only one "all-purpose" gauge is available. Here it is safe to assume that the nature of the tile makes it applicable over a broad range of conditions in the type of service for which it was designed.

Linoleum and Sheet Plastic Floors

Development of backing materials. Backings were originally used on resilient floors merely as a carrier to support the flooring materials during processing. Now they make important contributions to the flooring by adding even greater resilience and comfort. Recent developments include special felts such as Armstrong Armofelt. This backing material, saturated with resins, gives very superior performance.

Hydrocord is another new backing development. It is a new water-resistant backing available on certain stylings of sheet Corlon. A highly flexible, inert composition, Hydrocord is unaffected by alkaline moisture, thus making possible for the first time the installation of resilient sheet flooring over concrete subfloors in direct contact with the ground in basements as well as on grade-level concrete slabs.

The gauge of the resilient flooring material cannot be considered without reference to both the composition of the flooring material and its backing. Some of the newer resilient floors in their thinner gauges provide durability equal to or better than that supplied by thicker gauges of the more traditional materials. This is due to the superiority of their compositions as well as newly developed synthetic binders.

Selection of gauge. In choosing linoleum, Service and Standard gauges should be used only in areas of light traffic, or where initial cost dominates considerations of durability. Heavy gauge linoleum should be used for most commercial installations, since such floors are subjected to concentrated traffic.

The durability of the new plastic compositions permits plastic flooring materials to be manufactured in thinner gauges with serviceability equal to that of linoleum in heavier gauges. For example, the thinner gauges of Armstrong Corlon sheet plastic flooring can be regarded as equal to Standard gauge linoleum.

The gauge and type of backing of resilient flooring affect its "comfort value." For a comparison of this quality, as it applies to various types of resilient floors, see page 22.

Suggested resilient floor gauges for commercial (including institutional), residential, and industrial installations

(Heavier gauges eliminated where thinner gauge represents a more economical value)

Material	Over-all Gauge	Wear Layer Thickness	Suggested use indicated by colored blocks				
			Severe Commercial	Commercial	Light Commercial	Residential	Light Residential
ASPHALT TILE, Standard	3/16"	3/16"					
	1/8"	1/8"					
EXCELON TILE	1/8"	1/8"					
	Service Gauge	1/16"					
CUSTOM CORLON TILE	1/8"	1/8"					
	3/32"	3/32"					
RUBBER TILE	3/16"	3/16"					
	1/8"	1/8"					
LINOTILE	1/8"	1/8"					
CORK TILE	5/16"	5/16"					
	3/16"	3/16"					
	1/8"	1/8"					
	3/32"	3/32"					
CUSTOM VINYL CORK TILE	1/8"	1/8"					

CORLON (Sheet Vinyl)			Severe Commercial	Commercial	Light Commercial	Residential	Light Residential
Decoresq (Armofelt Back)	.070"	.030"					
Decoresq (Hydrocord Back)	.0625"	.030"					
Granette	.070"	.030"					
Terrazza (Armofelt Back)	.070"	.030"					
Terrazza (Hydrocord Back)	.0625"	.030"					
Masaic (Armafelt Back)	.070"	.030"					

LINOLEUM			Severe Commercial	Commercial	Light Commercial	Residential	Light Residential
Battleship, Heavy Gauge	.125"	.090"					
Plain, Heavy Gauge	.125"	.090"					
Standard Gouge	.090"	.050"					
Jaspé, Heavy Gauge	.125"	.090"					
Marbelle, Heovy Gauge	.125"	.090"					
Standard Gauge	.090"	.050"					
Service Gauge	.0625"	.026"					
Textelle, Heavy Gauge	.125"	.090"					
Royelle, Standard Gauge	.090"	.050"					
Imperial, Heavy Gauge	.125"	.090"					
Standard Gauge	.090"	.050"					
Embossed Inlaid, Craftline, & Spatter-Standard Gauge	.090"	.050"					
Decaray, Standard Gauge	.070"	.030"					
Parquet and Decoray Tile, Service Gauge	.0625"	.026"					

Relative costs of resilient floors

Beyond the service and style variations in the many types of resilient floors, there are also wide differences in costs. They range all the way from the economy flooring materials, such as the "A" colors in asphalt tile and Service gauge linoleum, to the luxury floors of rubber tile, vinyl-plastic Custom Corlon Tile and Custom Vinyl Cork Tile. In addition, costs of resilient floors can vary widely depending upon the design. A floor in a single color or styling laid wall to wall generally is less costly than a complex custom styled floor involving exceptional craftsmanship and extra attention to detail on the job.

As manufacturers of resilient floors, the Armstrong Cork Company cannot safely quote actual installed prices since there are many factors that affect the cost of the floor installation beyond the price of the material. As mentioned above, the floor design alone can have an important bearing on the cost. Other items that must be taken into account include subfloor conditions and labor rates and efficiencies. Such factors vary from one section of the country to another as well as from job to job.

An outright specification for Armstrong materials will still result in competitive bidding from a number of flooring contractors and at the same time give assurance of top quality materials. The invitation to bid should indicate all the items which fall within the scope of the flooring contractor's work in addition to the flooring materials. The flooring contractor's ability and reputation should then be considered in determining the best value.

The price ranges into which the different types of resilient flooring materials can be classed are shown on the chart on the next page. From this chart it will be seen that asphalt tile and various linoleum tiles are considered the lowest cost resilient floors, with the "A" or darker colors of asphalt tile the most economical and grading up to the brighter "D" colors. Linoleum is next in line. However, the lighter gauges of linoleum are about equal to the most expensive colors in asphalt tile.

Further up the price scale is Excelon Tile, cork tile in the 3/32″ and ⅛″ gauges, Linotile, rubber tile, Custom Corlon Tile, and Custom Vinyl Cork Tile in the order named. Differences in gauge, color, and styling within a resilient flooring line all have a bearing on the cost of the job.

When fairly accurate costs are required prior to receiving bids, it is suggested that you call on your Armstrong representative for assistance. By determining the various factors involved, he can help you work out an approximate cost of the proposed flooring that will be suitable for estimating purposes.



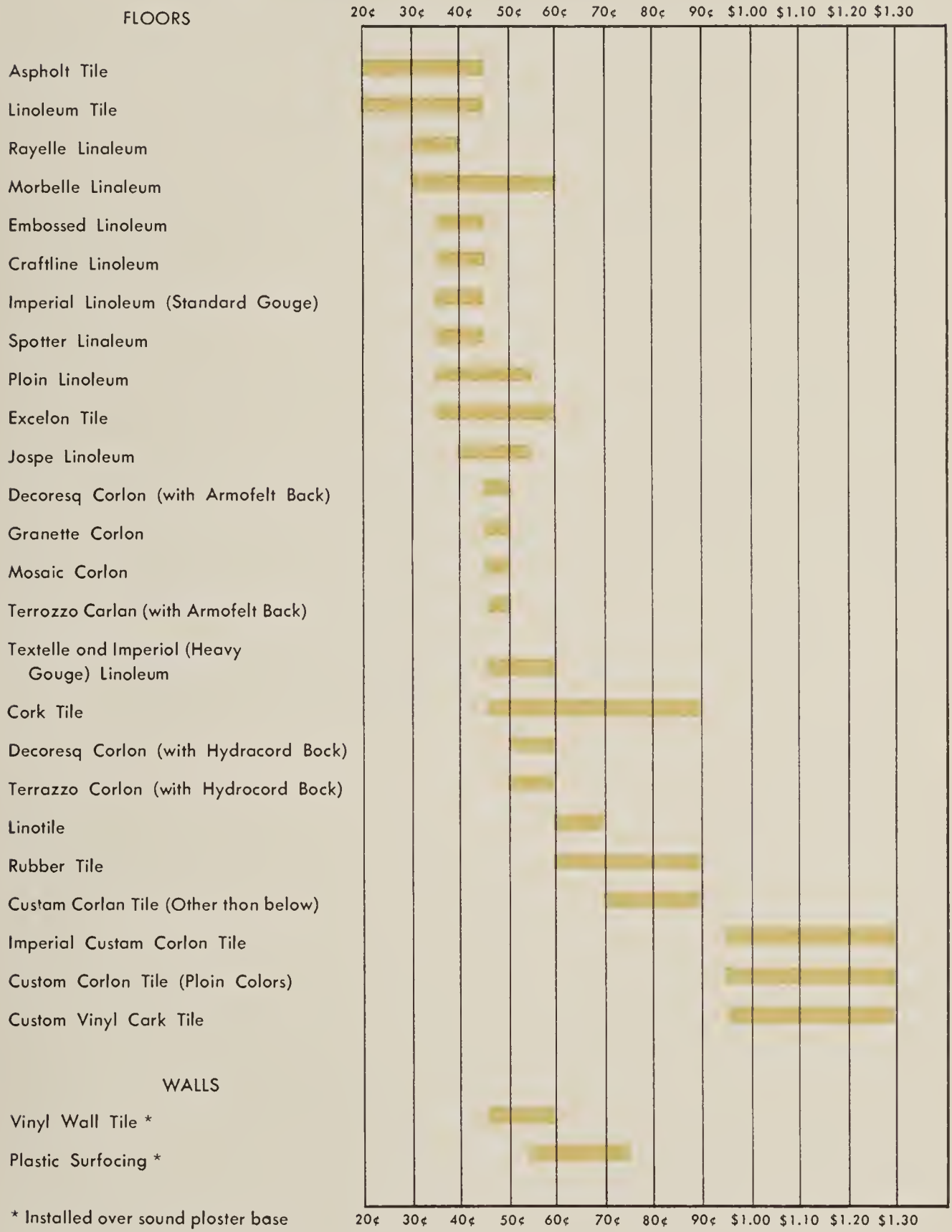
Floor designs can be effective without increasing the cost of the installation. This floor of Armstrong Rubber Tile is an example. Three colors were used in a simple diagonal design.



Elaborate custom styling such as in this floor of Armstrong Textelle Linoleum requires intricate cutting and fitting. The extra labor involved adds to the cost of the installation.

Approximate installed prices per square foot

(Over suspended concrete, minimum area 1000 square feet)



* Installed over sound ploster base

How to write clear specifications for resilient floors

In writing specifications for resilient floors, it is important that the specifier understand, in general, the complexities of installation, labor, and material costs. It is equally important that the specification writer be able to correctly classify the materials and work to be done so that all bidding contractors will base their estimates on the same standards. In many instances, the misunderstandings that occasionally arise on a project stem from the incomplete details of the specifications. The lack of proper details can have a serious effect on the contractor's labor and material costs. Because of the variety of materials the specification writer works with, it is impractical for him to become familiar with all such details. However, if he has a working knowledge of variations in cost of resilient flooring materials, labor, and subfloor preparation, he should have little trouble in developing clear and concise resilient flooring specifications.

Price Variations in Flooring Materials

Among the factors which govern resilient flooring material prices are:

Type and Style of the Resilient Flooring
Type of Backing
Gauge or Thickness of the Material
Color and Graining
Standard or Special Sizes

Resilient flooring materials are manufactured in several types and gauges to meet various service requirements. In many cases, each type is made in a number of stylings to permit greater design freedom.

One of the items often omitted from resilient flooring specifications is the naming of the particular flooring style and color group. This part of the specification is a very important factor in figuring costs. For example, Armstrong Linoleum falls into several price groupings according to gauge, style, and backing as explained on page 34.

Armstrong Asphalt Tile prices vary according to color. The "A" or darkest colors are the lowest in cost and grade up in price to the "D" or lightest colors.

Armstrong Rubber Tile, Cork Tile, Linotile, and Excelon Tile vary in product cost, but there is no price differential within the color lines. (The price structure of resilient floorings is explained in greater detail in the section titled "Relative costs of resilient floors" on page 34.)

One of the clearest ways to specify resilient flooring materials is to indicate the manufacturer's name and color number. When this is not possible, or if a floor design cannot be selected in advance, it is important that a clear understanding be given of the percentage of each material to be used. For example,

". . . ⅛" Asphalt tile design to be composed of color groups: B—25%, C—50%, D—25%, . . ." or,

". . . Linoleum in rooms 110 and 112 to be ⅛" Jaspé with 12" borders of ⅛" plain regular colors."

Such a specification will give each flooring contractor a standard basis for figuring his bid.

Variations in Contractor's Installation Costs

The labor involved in laying a particular floor design is a big factor in figuring price. If the specification fails to give a clear idea of the complexity of the design, the contractor may base his bid on fewer installation man hours and underbid the job. In such cases, there is sure to be an expenditure of time and words—if not money—before the misunderstanding is settled.

To prevent such misunderstandings, it is recommended that detail drawings of at least one of the floor designs be shown when they are too complex for adequate written description in the specifications. A typical example of such a drawing is shown on page 37. Simplified specifications of materials, colors, gauges, and sizes shown on, or supplied with, the drawings will also be helpful.

Underlayment Requirements in Remodeling Jobs

On remodeling work it is always advisable to list all necessary repairs in the specifications, such as replacing badly worn boards, sanding floors, the use of hardboard underlayments such as Armstrong Temboard Underlayment or plywood—or the asphaltic or latex type of mastic underlayment, filling cracks in concrete, etc. Never use a blanket specification such as, ". . . the old subfloor shall be repaired to provide a suitable base for resilient flooring." Such specifications invariably invite the least expensive method of subfloor preparation, which is seldom to the advantage of the customer. From the contractor's point of view, competition leaves him no choice but to bid on the

least expensive methods. Tight subfloor preparation specifications put all contractors on an equal bidding basis.

It is not necessary for the specifications to state how the flooring contractor should install the flooring materials. It is far safer and more exact to specify that the resilient flooring materials be "installed in accordance with the manufacturer's latest printed instructions."

SPECIAL NOTE: Since the Armstrong Line of floors is available to any legitimate flooring contractor, an outright specification for Armstrong materials will produce competitive bidding while also assuring the builder of premium quality materials.

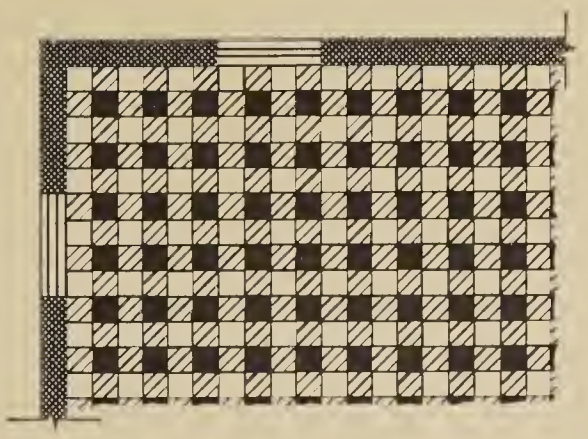
From specifications

Section No. 10 Resilient Flooring

Furnish and install 1/8" Armstrong Asphalt Tile and heavy gauge Armstrong Linoleum in the colors, patterns, sizes and designs shown on the drawings and in the areas listed in the schedule of finishes.

All products covered by these specifications are to be installed in accordance with the latest edition of Armstrong Installation Specifications by a qualified Armstrong flooring contractor whose bid shall include all the materials and labor required.

From detail drawings



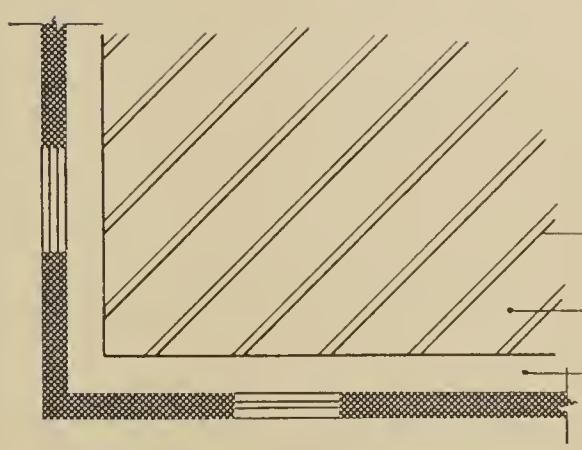
FLOOR DESIGN
ROOMS
6 • 10 • 13 • 14

Armstrong
⅛" Asphalt Tile
All Tile 9" x 9"

□ D. 942

▨ C. 924

■ B. 935



FLOOR DESIGN
OFFICE RM. 125

Armstrong
⅛" Gauge Linoleum

#23 1" Linostrip
#27 ½" Linostrip

#018 Marbelle

#27 Plain

Simple detail drawings of the floor design with the manufacturer's color numbers indicated eliminate the need for a full description of the materials to be used. From the drawings and general specifications, the bidding contractor can quickly see the work involved in the flooring job. Installation methods approved by the manufacturer of the flooring should be specified.

Federal specifications

Federal Specifications are written to establish minimum standards for purposes of competitive bidding and to insure that various government agencies will receive quality material. They do not necessarily include provision for all products or provide for products made exclusively by a single manufacturer and protected by patent laws. An example of this is Armstrong Linotile, an exclusive Armstrong flooring material unlike anything else in its classification. Some of the new plastic flooring materials also cannot be classed under a general Federal Specification because of the broad variation of materials in the market. Armstrong Floors not only meet the requirements of Federal Specifications pertaining to their classifications, but generally exceed the requirements.

Federal Specification SS-T-306b

TILE FLOOR; ASPHALT

Armstrong Asphalt Tile meets or exceeds the requirements of this Federal Specification for asphalt tile in ⅛" and 3/16" gauges (except Corkstyle and Spatter stylings which do not meet the requirements of paragraph 3–3).

Federal Specification SS-T-307

TILE FLOOR; ASPHALT GREASE RESISTANT

Armstrong Greaseproof Asphalt Tile meets or exceeds the requirements of this Federal Specification for grease-resistant asphalt tile in ⅛" and 3/16" gauges.

Interim Federal Specification L-T-751 (GSA-FSS)

TILE FLOOR; VINYL PLASTIC

(Type 1, Semi-Flexible)

Armstrong Excelon Tile meets or exceeds the requirements of this Federal Specification for vinyl plastic floor tile, semi-flexible, in 0.125" (⅛") gauge (except Corkstyle and Spatter stylings which do not meet the requirements of paragraph 3–3).

Interim Federal Specification L-T-751 (GSA-FSS)

TILE FLOOR; VINYL PLASTIC

(Type 2, Flexible)

Armstrong Custom Corlon Tile and Imperial Custom Corlon Tile meet or exceed the physical requirements of this Interim Federal Specification for flexible vinyl plastic floor tile in 0.125" (⅛") gauge.

Federal Specification ZZ-T-301a

TILE FLOOR; RUBBER

Armstrong Rubber Tile meets or exceeds the requirements of this Federal Specification for rubber tile in ⅛" and 3/16" gauges.

Federal Specification LLL-L-351b

LINOLEUM; BATTLESHIP

The regular colors in Armstrong Plain Linoleum meet or exceed all requirements of this Federal Specification for heavy gauge, 0.125" (⅛") linoleum on burlap backing.

Federal Specification LLL-L-367

LINOLEUM; PLAIN, JASPÉ AND MARBLEIZED

Armstrong Plain Linoleum, Jaspé Linoleum, Marbelle Linoleum, and Textelle Linoleum meet or exceed all requirements of this Federal Specification for heavy gauge, 0.125" (⅛") linoleum on burlap backing.

Federal Specification LLL-F-471

FLOOR COVERING; FELT-BACKED

(Type 1—Linoleum Composition; Class A, Roll Form, and Class B, Tile Form; Grade B and Grade C)

All Armstrong Standard Gauge (.090") and Service Gauge (.0625") Linoleum meets or exceeds the requirements of this Federal Specification for standard and service gauge linoleum on felt backing.

Federal Specification LLL-L-354

LINOLEUM; DESK TOP

Armstrong Desk Top Linoleum meets or exceeds the requirements of this Federal Specification for desk top linoleum.

NO FEDERAL SPECIFICATIONS

No federal specifications have been evolved for the following materials:

Armstrong Cork Tile and Custom Vinyl Cork Tile, as manufactured by a patented electronic process exclusive with the Armstrong Cork Company.

Armstrong Corlon (vinyl plastic sheet-form flooring with Armofelt or Hydrocord Backs)

Armstrong Linotile (homogeneous floor tile, oil-bonded)

Armstrong Plastic Surfacing

Armstrong Vinyl Wall Tile (See Fire Hazard Classification by Underwriters' Laboratories, Inc.)

Abridged specifications for resilient flooring

THESE SPECIFICATIONS COVER INSTALLATIONS OF

Asphalt Tile—Greaseproof Asphalt Tile—Corlon (Sheet Plastic)—Custom Corlon Tile—Linotile—Rubber Tile
Linoleum—Linoleum Tile—Cork Tile—Custom Vinyl Cork Tile—Excelon Tile

Wall Coverings . . page 43

Complete Unabridged Installation Specifications for any Armstrong Floor or Wall Material (See Page 42) may be had upon request from any Armstrong Office.

How to Use—In the following specifications, items have been grouped by trades. Essential matter is presented as prewritten specification clauses in Roman type. Matter in *italics* is explanatory or indicates where the architect must fill in dimensions, brand names, etc. These specifications are arranged to facilitate the use of either an outright or descriptive product designation.

Caution—Armstrong Corlon with felt backing, Armstrong Linotile, and Armstrong Linoleum should not be installed on any floor in direct contact with the ground. Armstrong Corlon with Hydrocord Back may be installed on grade or below grade in accordance with Armstrong Installation Specifications. Armstrong Rubber Tile and Custom Corlon Tile may be specified for grade-level and below-grade installation when installed in accordance with Armstrong Installation Specifications. Armstrong Cork Tile and Armstrong Custom Vinyl Cork Tile may be installed on grade in accordance with Armstrong Installation Specifications. Armstrong Asphalt Tile, Armstrong Excelon Tile and Armstrong Greaseproof Asphalt Tile are recommended for installation on subfloors on or below grade, as well as on suspended floors.

BRIEF SPECIFICATION

Furnish and install Armstrong Resilient Floors in the types, gauges, colors, sizes, and designs as herein specified on areas listed below or where shown on drawings. *(List areas here.)* All products covered by these specifications are to be installed in accordance with the latest edition of Armstrong Installation Specifications by a qualified Armstrong flooring contractor whose bid shall include all the labor and materials required.

COMPLETE SPECIFICATION

SPECIFICATIONS FOR FLOORING CONTRACTOR

The General Conditions of the Contract are a part of these specifications.

1. Work Included

The contractor shall furnish all labor and materials required to complete all the resilient flooring and cove base work shown on the drawings. or herein specified, as follows:

a. Linoleum, Sheet Corlon, Linotile, Asphalt Tile, Excelon Tile, Rubber Tile, Custom Corlon Tile, Cork Tile and/or Custom Vinyl Cork Tile floors, Flash Type Cove Base and/or Top-Set Rubber and/or Asphalt Cove Base.

(1) on the areas listed below, *or*

(2) where shown on drawings.

b. Lining felt.

c. Cushion-Eze Underlayment.

d. Cleaning, waxing, and polishing of all work installed under this section of the specification.

e. (*number*) samples 3″ x 3″ or larger, of each color and type of resilient floor and base.

f. Shop drawings of designs of custom floors.

g. Guarantee.

h. Underlayment (*include when specifying hardboard, plywood, latex or asphaltic mastic floor fill when any underlayment is to be installed by the flooring contractor*). *Do not specify asphaltic floor fill over areas where Rubber Tile or Custom Corlon Tile is being installed with Armstrong No. S-104 Chemical-Set Waterproof Cement. Do not specify asphaltic floor fill as an underlayment for Linotile.*

2. Work Excluded

(Items which could be considered as part of this section, but which are included in the specifications for other trades.)

a. Install resilient floors only to, but not under, the base of cabinets, cupboards, and other built-in furniture.

b. Underlayment (*include when it is desired to have the installation of hardboard such as Armstrong Temboard Underlayment, or plywood as an underlayment under the carpentry contract*).

c. Heat and ventilation during cold weather to maintain 70°F. while laying is being done.

3. Linoleum

Linoleum shall be

(1) Linoleum with burlap, Armofelt, or saturated felt backing as manufactured by the Armstrong Cork Company, *or*

(2) first-quality material and composed of an oxidized oleoresinous composition, pigments, and fillers and shall have a supporting backing of (*specify type*). It shall be dense but resilient and highly resistant to abrasion.

3A. Plastic Flooring

Plastic floor covering shall be

(1) Corlon (sheet-type) with Armofelt or Hydrocord backing as manufactured by the Armstrong Cork Company, *or*

(2) Custom Corlon Tile as manufactured by the Armstrong Cork Company, *or*

(3) first-quality material composed of vinyl resins, alkaline resisting color pigments, and other plastic compounds, all thoroughly mixed to form a dimensionally stable and resilient flooring. It shall be dense, but resilient and highly resistant to abrasion. Roll or sheet-type material shall have a supporting backing of (*specify type*). Homogeneous tile shall not have a supporting backing. Tile shall be accurately

cut with square edges. The tile shall be capable of withstanding heavy furniture loads up to 200 lbs. per sq. in. without exhibiting permanent indentation.

(4) Excelon Tile as manufactured by the Armstrong Cork Company, *or*

(5) first-quality material, 1/16" or 1/8" thick, and composed of a thoroughly blended composition of vinyl plastic resins, asbestos fibers, alkali resisting pigments and fillers. It shall be dimensionally stable, fire-retardant and thoroughly resistant to alkali, grease and oils. Tile shall be uniform in thickness and accurately cut with square edges.

3B. Linotile

Tile shall be

(1) Linotile as manufactured by the Armstrong Cork Company, *or*

(2) first-quality material, 1/8" thick, of an oxidized oleo-resinous composition, resins, pigments, and fillers. It shall not have a supporting backing. It shall be dense but resilient, highly resistant to abrasion, and capable of withstanding heavy furniture loads up to 200 lbs. per sq. in. without exhibiting permanent indentation. Tile shall be accurately cut, with square, true edges, and uniform in thickness. The colors shall run entirely through the tile.

3C. Asphalt Tile—*Standard, Greaseproof*

Tile shall be

(1) Asphalt tile as manufactured by the Armstrong Cork Company, *or*

(2) first-quality material 1/8" *or* 3/16" thick and composed of a thoroughly blended composition of thermoplastic binder of the asphalt and/or resinous type, asbestos fibers, pigments, and fillers. Tile shall be uniform in thickness and accurately cut, with square, true edges.

3D. Rubber Tile

Tile shall be

(1) Rubber tile as manufactured by the Armstrong Cork Company, *or*

(2) first-quality material, 1/8" *or* 3/16" thick, and shall be homogeneous throughout. It shall consist of a properly cured rubber compound free of objectionable odors. The tile shall be capable of withstanding heavy furniture loads up to 200 lbs. per sq. in. without exhibiting permanent indentation.

3E. Cork Tile

Tile shall be

(1) Cork tile as manufactured by the Armstrong Cork Company, *or*

(2) first-quality material, 3/32", 1/8", 3/16", *or* 5/16" thick, and made from a selected grade of pure cork, homogeneous from face to back, free from any foreign fillers and thoroughly and evenly bonded with an added heat-processed resinous binder. The tile shall be accurately cut and be uniform in thickness.

3F. Vinyl Cork Tile

Tile shall be

(1) Vinyl Cork Tile as manufactured by the Armstrong Cork Company, *or*

(2) first-quality material, 1/8" thick, capable of withstanding heavy furniture loads up to 125 lbs. per sq. in. without exhibiting permanent indentation. It shall be made from selected grades of pure cork, free from any foreign fillers, thoroughly and evenly bonded with an added heat-processed resinous binder, and shall have a vinyl surfacing fused to surface and beveled edges. The tile shall be accurately cut and uniform in thickness.

4. Colors, Patterns, and Sizes

a. (*Always specify field and border color numbers to avoid confusion.*)

(1) field colors shall be, border colors and widths shall be, *or*

(2) field and border colors and sizes shall be as shown on the Schedule of Finishes.

b. Feature strips shall be

(1) inches wide and (*color*), *or*

(2) as shown on the Schedule of Finishes.

5. Flash Type Cove Base

a. Base shall be

(1) linoleum or sheet-type Corlon (*specify gauge and color*) with metal binding strip, end stops, corner pieces, and 7/8" wax fillet complete.

b. Nail binding strips, end stops, and corner pieces tight to the wall with cement coated flat head or ring groove nails. Install wax fillet strip with Armstrong S-128 Paste.

c. Base shall be (*4½" or 6"*) high.

6. Top-Set Rubber Cove Base

a. Base shall be

(1) top-set rubber cove base as manufactured by the Armstrong Cork Company, *or*

(2) rubber base with molded top-set cove, preformed end stops, internal and external corners.

b. Base shall be in color and shall be (*4" or 6"*) high.

7. Top-Set Asphalt Cove Base

a. Base shall be

(1) top-set asphalt cove base as manufactured by the Armstrong Cork Company, *or*

(2) asphalt base with molded top-set cove.

b. Base shall be sufficiently flexible so that internal and external corners can be formed easily from 3- or 4-foot sections by heating and bending.

c. Base shall be in color and shall be (*4" or 6"*) high.

8. Lining Felts

Lining felt shall be

(1) Armstrong S-149 Heavy Duty Felt, *or*

(2) Armstrong S-150 Semi-Saturated Asphalt Rag Felt, *or*

(3) Armstrong Cushion-Eze Underlayment, *or*

(4) as approved by the Armstrong Cork Company.

9. Adhesives

a. For Corlon (with Armofelt Back) or Linoleum

(1) Armstrong S-128 Paste, *or*

(2) Armstrong S-235 Cement, *or*

(3) Armstrong S-214 Waterproof Cement, *or*

(4) As approved by the manufacturer of the flooring.

b. For Corlon with Hydrocord Back

(1) Armstrong S-235 Cement.

c. For Linotile, Rubber Tile or Custom Corlon Tile

(1) Armstrong S-130 Resilient Tile Paste, *or*

(2) Armstrong S-214 Waterproof Cement, *or*

(3) Armstrong S-104 Chemical-Set Cement or Armstrong S-235 Cement where Armstrong Rubber Tile or Custom Corlon Tile is being installed on grade level. (*Do not install Linotile on or below grade.*), *or*

(4) Armstrong S-104 Chemical-Set Cement (*where Rubber Tile or Custom Corlon Tile is being installed below grade*), *or*

(5) as approved by the manufaeturer of the tile floors.

d. For Cork Tile or Custom Vinyl Cork Tile
 (1) Armstrong S-214 Waterproof Cement.

e. For Asphalt Tile, Greaseproof Asphalt Tile, or ⅛" Excelon Tile
 (1) Armstrong S-160 Emulsion, *or*
 (2) Armstrong S-90 Cement, *or*
 (3) Armstrong S-700 Brushing Cement, *or*
 (4) as approved by the manufacturer of the flooring.

f. For Service Gauge Excelon Tile
 (1) Armstrong S-700 Brushing Cement, *or*
 (2) Armstrong S-90 Cement, *or*
 (3) as approved by the manufaeturer of the flooring.

g. For Cove Base
 (1) Top-Set Rubber Cove Base shall be installed with Armstrong S-1200 Corlex Cement.
 (2) Top-Set Asphalt Cove Base shall be installed with Armstrong S-245 Top-Set Asphalt Cove Base Cement.

h. Lining felt and Cushion-Eze Underlayment shall be installed with Armstrong S-128 Paste, or Armstrong S-130 Resilient Tile Paste, or Armstrong S-235 Cement, or Armstrong S-214 Waterproof Cement.

10. Samples

a. Arehitect must approve samples before job starts.

b. Samples must be labeled, stating color, gauge, and location in which they are to be used, and the maker's name.

INSTALLATION

Note: *For methods of installing resilient floors over different types of subflooring—refer to page 50.*

11. Subfloor

a. Lay the resilient flooring on a subfloor of (*state type*) which this contractor shall inspect before starting work.

b. Notify the architect in writing of any defects in the subfloor. Do not proceed until such defects have been corrected. Starting of work shall imply acceptance by this contraetor of the subfloor.

12. Preparation

a. The subfloor will be delivered to this contractor broom clean, free of all foreign matter and thoroughly dry.

b. Fill all cracks, expansion joints, etc., in concrete subfloors with Armstrong S-190 Crack Filler.

c. Prime wood subfloors that have been sanded with one brush coat of Armstrong S-140 Floor and Wall Size.

13. Laying

a. Lay the resilient floor so as to be true, level, and even with tight joints, and in accordance with manufacturer's installation instructions.

b. Lay sheet resilient flooring at right angles to floor boards. If a seam parallels the floor boards, paste Armstrong S-96 Seam Protector directly under flooring seams and over the felt.

c. Match patterned sheet-type flooring at all seams.

d. On strip wood floors, lay all resilient tiles (except asphalt and ⅛" Excelon Tile) diagonally to the direction of the floor boards. Keep all joints symmetrical.

e. Fit borders accurately.

f. Fit to and around all permanent fixtures.

g. Roll in two directions with 100-pound or heavier roller. (*Optional for asphalt tile or ⅛" Excelon Tile.*)

h. Clean off surplus adhesive according to manufacturer's instructions.

14. Other Subfloors

For subfloors not covered in these specifications, such as metal, magnesite, ceramic tile, etc., write to Armstrong Cork Company, District Office, or to Lancaster, Pa., for recommendations.

15. Installing Flash Type Cove Base *(select suitable clauses below)*

a. For concrete floors not plugged, set ⅝" diameter wood plugs, at least 1" long, flush with the concrete floor for nailing end stops and corner pieces of base.

b. For concrete walls not having wood grounds, set ⅝" diameter wood plugs at least 1" long in the walls at proper height, not over 9" on center, flush with concrete for nailing binding strip, end stops, and corner pieces of base.

c. Install binding strip, end stops, and corner pieces with cement-coated flat head nails or drive screws, securing pieces flush and tight to wall and floor.

d. Install ⅞" wax fillet strip at intersection of floor and wall with Armstrong S-128 Paste.

e. Fit base sheet-type flooring to binding strip, stops, etc., and to floor. Paste with S-128 Paste. Miter corners at floor so that field or border is flush with flashed flooring.

16. Installing Top-Set Rubber Cove Base

a. Firmly cement rubber cove base to wall with Armstrong S-1200 Corlex Cement.

b. Form internal and external corners using preformed rubber cove base corners or in aecordance with manufacturer's instructions. Install with Armstrong S-1200 Corlex Cement.

17. Installing Top-Set Asphalt Cove Base

a. Firmly cement the asphalt cove base to wall with Armstrong S-245 Top-Set Cove Base Cement.

b. Form internal and external corners from three- or four-foot sections of base in accordance with manufacturer's instructions. Accurately scribe base to trim and plinth.

18. Stair Treads

a. Install resilient flooring on all stair treads, including top treads, landings, and platforms (*specify locations*).
 (1) Treads must finish flush with metal nosings, *or*
 (2) Provide and install a continuous nosing (*specify kind*), with top edge flush with the surface of resilient floor. Secure rigidly in place by (*specify method*).

19. Cleaning and Waxing

Clean all flooring thoroughly in aecordance with manufacturer's maintenance recommendations.

20. Guarantee

This contractor shall guarantee that all work executed under this section of the specification will be free from defect in material and workmanship, provided any such defect is brought to the attention of the contractor in writing within one year after completion of the work. Upon such notice, the contractor shall, at his own expense, make the necessary repairs or replacements of the defeetive work in question. The owner shall, however, be responsible for the removal and replacement of all fixtures and equipment attached to the surface on which the work will be done.

ITEMS FOR CARPENTRY SECTION

1. General

Wood subfloors shall be brought to a smooth, even surface a sufficient distance below the finished floor level to allow for the installation of the resilient flooring.

2. Single Wood Floors

(*Never install resilient flooring over single wood subfloors.*)

a. (*For single wood floors of tongue-and-groove boards not over 4" face width.*) Cover the floor with a layer of hardboard (*such as Armstrong Temboard Underlay-*

Flooring installation specifications, continued

ment) or ⅜″ or heavier DFPA plywood grade "BD" or better, firmly nailed with cement or rosin-coated or ring-grooved nails or approved stapling equipment, spaced not more than 4″ apart in both directions and at all edges. The pieces shall be not larger than 4′ x 4′ and laid ashlar fashion 1/32″ apart, with continuous joints at right angles to floor boards. (*In the case of hardboard, include: "with sanded side up."*)

b. (*For single wood floors not tongue-and-grooved.*)

(1) Cover the floor with 25/32″ kiln-dried tongue-and-groove flooring, not over 3″ face, laid at an angle of 45° to the under layer. Cut end joints square, drive tight, and blind-nail with 8d cut flooring nails.

(2) Cover with ½″ or heavier DFPA plywood, grade BD or better.

3. Single Plywood Floors

Cover the joists with ¾″ 5-ply plywood such as DFPA grade BD or better, in a size of not over 4′ x 8′. Install with surface grain direction perpendicular to joists with the joints parallel to the joists staggered. All joints parallel to joists to be centered over the joists. Install 2″ x 3″ or heavier cross blocks between joists under all joints of the plywood at right angles to joists. Floor joists to be not over 16″ O.C. Plywood shall be face nailed at every bearing with 8d ring-grooved or rosin-coated nails, spaced at intervals of 6 inches, and around perimeters at intervals of 4 inches.

4. Double Wood Floors

Install double wood floors (*list areas*). Under layer shall be ⅞″ tongue-and-groove boards not over 8″ wide. Lay boards at right angles to the joists, with the end joints square, staggered, and over bearings only. All boards shall be face nailed at each end and at every bearing with two 8d nails. Finish flooring shall be as specified in 2 above. (*If the finish flooring is omitted, cover the under layer as in 2 a.*)

5. Repairing Old Wood Floors

Existing floors throughout (*specify areas*) shall be repaired as follows: (*Select clauses from (1) to (4) if existing floors are uneven and are not being leveled with floor fill*).

(1) Fill cracks wider than ⅛″ and holes larger than ¼″ with plastic wood or snugly fitted wood plugs.

(2) Replace defective boards with new material.

(3) Renail boards where necessary to make secure.

(4) If the finish flooring is omitted, cover the under layer as in 2 b above.

6. Baseboards and Plinths

Extend all wood baseboards and/or plinths to the subfloor. Where flash type cove base is specified, install wood nailing strip in the wall as specified and flush with finished walls.

7. Scraping and Sanding

Scrape and/or sand all uneven areas in the wood flooring to make suitable for application of the resilient flooring.

ITEMS FOR MASONRY SECTION

1. The surface of all concrete floors *(specify areas)* as well as the treads, landings, and platforms of stairs *(specify location)* shall be steel troweled to a smooth, even, level, hard surface, free from expansion joints, scale, or foreign deposits. The use of concrete hardeners, magnesite and cinder-filled concrete should be avoided.
2. Concrete subfloors shall be brought to a smooth, even surface a sufficient distance below the finished floor level to allow for the installation of the resilient floor.

ITEMS FOR PLASTERING SECTION

1. *(Where Cove Base of either type is used.)* All plastering on walls *(specify areas)* shall be made smooth, even, and free from imperfections and shall be carried to the subfloor.

Complete Installation Specifications Available

Complete Unabridged Installation Specifications for all of the various Armstrong Floor, Wall, and Counter-Top Materials may be had upon request from any Armstrong Floor Division District Office.

A. I. A. File No. 23-G

Specifications for Installing Armstrong Asphalt Tile
Specifications for Installing Armstrong Cork Tile and Custom Vinyl Cork Tile
Specifications for Installing Armstrong Sheet Vinyl Corlon with Armofelt Back
Specifications for Installing Armstrong Sheet Vinyl Corlon with Hydrocord Back
Specifications for Installing Armstrong Custom Corlon Tile
Specifications for Installing Armstrong Excelon Tile
Specifications for Installing Armstrong Linoleum
Specifications for Installing Armstrong Linotile
Specifications for Installing Armstrong Rubber Tile

A. I. A. File No. 23-L

Specifications for Installing Armstrong Plastic Surfacing
Specifications for Installing Armstrong Vinyl Wall Tile

A. I. A. File No. 23-Q

Specifications for Use of Armstrong Underlayments

A. I. A. File No. 35-C-12

Specifications for Installing Armstrong Counter Tops

Abridged specifications for walls

These Specifications Cover Installations of Armstrong Vinyl Plastic Surfacing, Armstrong Vinyl Wall Tile, and Armstrong Cork Tile for walls.

BRIEF SPECIFICATIONS

Furnish and install Armstrong Cork Tile, Armstrong Vinyl Plastic Surfacing, or Armstrong Vinyl Wall Tile in the colors, patterns, and designs as herein specified, on the areas listed below, or where shown on the accompanying drawings. (*List areas here.*) All products covered by these specifications are to be installed in accordance with the latest edition of Armstrong specifications by a qualified Armstrong contractor whose bid shall include all the labor and materials required.

NOTE: *Do not install Armstrong Cork Tile, Vinyl Plastic Surfacing or Vinyl Wall Tile in shower stalls. Armstrong Vinyl Plastic Surfacing is the only one of these three wall covering materials recommended for installation in built-in bathtub recesses where there are showers. Where Vinyl Plastic Surfacing is used under these conditions, install special plastic cove material as recommended by the manufacturer.*

COMPLETE SPECIFICATION

SPECIFICATIONS FOR THE WALL COVERING CONTRACTOR

1. Work Included

The contractor shall furnish all labor and materials required to complete the wall covering work as specified.

2. Work Excluded

a. Plaster patching and repairs. *(Include only when it is desired to have the work done by another contractor.)*

b. Heat maintained at 70°F. and room properly ventilated.

MATERIALS

3. Wall Covering

a. Cork Tile shall be:

(1) Cork Tile as manufactured by Armstrong Cork Company, *or*

(2) first-quality material, $^{3}/_{32}$" or $^{1}/_{8}$" thick and made from a selected grade of pure cork, homogeneous from face to back, free from any foreign fillers and thoroughly and evenly bonded with an added heat-processed clear resinous binder. The tile shall be accurately cut with square, true edges and be uniform in thickness.

b. Vinyl Plastic Surfacing shall be:

(1) Vinyl Plastic Surfacing as manufactured by the Armstrong Cork Company, *or*

(2) first-quality material composed of vinyl resins, alkali resisting color pigments, and other plastic compounds, all thoroughly mixed to form a dimensionally stable, stain-resistant wall covering. It shall be dense, but resilient and highly resistant to abrasion. It shall be in roll or sheet form, and shall have a supporting back which resists the effects of water, alkali, and mold.

e. Vinyl Wall Tile shall be:

(1) Vinyl Wall Tile as manufactured by the Armstrong Cork Company, *or*

(2) first-quality material, of a thoroughly blended vinyl composition. It shall be dimensionally stable, fire-resistant, and completely resistant to alkali, grease, and oils. The tiles shall be uniform in thickness and accurately cut with square edges. It shall have the Underwriters' Laboratories, Inc., Fire Hazard Classification as follows:

Flame spread—15
Fuel contributed—10-15
Smoke developed—0-25

Color (*always specify by number to avoid confusion*) and trim shall be *(wood, metal, resilient floor or wall covering cap strip, or other).*

4. Adhesives

Adhesive for Armstrong Cork Tile for walls shall be Armstrong S-245 Top-Set Cove Base Cement. Adhesive for Armstrong Vinyl Plastic Surfacing shall be Armstrong S-127 Cement. Adhesive for Armstrong Vinyl Wall Tile *must* be Armstrong S-1225 Cement, a requisite for complianee with Underwriters' Laboratories, Inc., Fire Hazard Classification; or Armstrong S-245 Top-Set Cove Base Cement where no fire hazard classification is specified.

5. Samples

a. Labeled samples must be approved by the architect.

INSTALLATION

6. Installation

Install (*Specify material: Armstrong Cork Tile for walls, Vinyl Plastic Surfacing, or Vinyl Wall Tile*) in accordance with manufacturer's installation specifications over (*state whether plaster, plasterboard or other*) which the contractor shall inspect before starting the work. Notify the architect in writing of any defects in the wall. Do not proceed until such defects have been corrected.

7. Preparation of Surfaces

a. New plaster should be white coated and thoroughly dry.

b. Remove existing wall covering, paint, etc., from walls.

e. Size dusty or porous plaster and cardboard face of plasterboard with Armstrong S-140 Floor and Wall Size.

8. Metal Trim

Apply metal trim, wood molding, or resilient cap strip, if specified, at wainscot top. Install metal, resilient cap strip, or wood-crowned molding at juncture between ceiling and wall line.

9. Guarantee

The contractor shall guarantee that all work executed under this section of the specification will be free from defect in materials or workmanship, provided that any such defect is brought to the attention of the contractor in writing within one year after completion of the work. Upon such notice, the contractor shall, at his own expense, make the necessary repairs or replacements of the defective work in question. The owners shall, however, be responsible for the removal and replacement of all fixtures and equipment which might interfere with the work to be done.

ITEMS FOR THE CARPENTRY SECTION

1. Wallboard

a. Wallboard shall be inch thick plasterboard, of gypsum faced with smooth cardboard and shall have recessed edges for the application of tape over joints.

b. Wallboard shall be nailed to studs and cross-headers. Install headers 2 feet to 3 feet on centers between studs. Nails shall be set and holes filled. Sand smooth.

e. Size all patches and dusty and porous plaster with Armstrong S-140 Wall Size.

d. If plaster is in too poor condition to repair, remove and replace with new plaster or approved wallboard.

e. Remove existing wall covering, paint, etc., from walls.

ITEMS FOR THE PLASTERING SECTION

1. General

Walls shall be brought to a smooth, even surface free of trowel marks or other defects.

2. New Plaster

a. In rooms where Armstrong Cork Tile for walls, Vinyl Plastic Surfacing, or Vinyl Wall Tile is to be installed, finish walls with a smooth, well-bonded white coat.

b. Walls shall be free of "hot" spots which might tend to "burn" adhesive or wall covering.

e. Make all inside and outside corners plumb and square.

3. Old Plaster

Patch all cracks and holes and sand to a smooth, level finish when dry and hard.

NOTE: *If plaster cannot be repaired, remove and replace with new plaster.*

Walls and counter tops

Vinyl surfacing materials for walls and counters are popular companions to resilient floors in residential, commercial, and institutional interiors. Available in both sheet and tile forms, these surfacing materials combine decorative beauty and practicality. They add durable color and keep maintenance costs at a minimum. In school and hospital rooms and corridors, for example, these surfacing materials are easily kept clean from smudges and resist staining from splashed and spilled things.

Armstrong Vinyl Plastic Surfacing is a flexible sheet vinyl material highly recommended for walls, counters, and sink tops. It is not easily harmed by hot soapy water, cleaning detergents, or other normal reagents. Accidental cuts can be sealed with a soldering or welding technique. Slight burns and scorches can be removed with steel wool.

Armstrong Vinyl Wall Tile is an economical wall surfacing with the added feature of fire resistance. It is listed under the Label Service of Underwriters' Laboratories, Inc., of the National Board of Fire Underwriters. Dimensionally stable, these tiles will not shrink, curl, or sag. Exceptionally flexible, they conform to wall contours and can be fitted easily to corners.

Armstrong Corlex is a high-pressure plastic laminate, also highly recommended for sinks, counter tops, or wall surfaces. Corlex has a wide application for commercial and institutional areas where surfaces must resist severe wear and staining.

Installation

In any areas where water is splashed, the success of the installation of wall and counter-top materials depends almost entirely upon making the seams and edges tight and waterproof. Moisture must not be allowed to get under the material and loosen the adhesive bond. Good construction at the basin requires the use of compression-type sink rims and the proper type of metal edgings. Manufacturers of most of these items recommend a particular type of construction for use with surfacing materials. Names of firms making metal edgings will be furnished by Armstrong upon request.

Preparation of Surfaces. The base surface must be absolutely clean. All paint, varnish, felt, and old adhesives should be removed by sanding or by the use of paint remover or safe cleaning fluids. Holes and cracks should be filled with patching plaster or plastic wood and sanded smooth when dry. Where existing sink tops and counters are to be recovered, badly warped or decayed wood and delaminated plywood should be replaced with new ¾″ exterior plywood, grade BC (Utility) or better.



This residential installation demonstrates the adaptability of Armstrong Vinyl Plastic Surfacing to wall, as well as sink and counter-top, use. This flexible plastic surface can be formed into attractive roll-type counter edges with no extra material cost.

Preparing old subfloors for resilient flooring

With the continuing importance of modernization projects, resilient flooring materials offer the simplest means of utilizing the previous floor construction. However, no resilient floor is better than the subfloor over which it is installed, and satisfactory results depend to a very great degree on correct preparatory work.

The installation of resilient floors in an old structure usually involves the conversion of what was once a wearing floor into a subfloor. Two main conditions must be met before such a floor forms a satisfactory base for a resilient finish floor. First, it is necessary to have a relatively smooth-surfaced subfloor, free from serious irregularities which would mar the appearance of the finish floor. Second, since nearly all resilient floorings are applied with adhesives, the old floor must be so prepared as to provide a satisfactory bonding surface for the adhesive.

Wood floors. The preparation of old wood floors for the installation of resilient flooring depends on the type of construction:

1. Single wood floors, not tongue-and-groove or tongue-and-groove flooring having more than 4″ face width, should be covered with $^{25}/_{32}$″ flooring or ½″ or heavier DFPA plywood. (For details of both wood and mastic type underlayments see pages 47 and 48.)
2. Single wood floors, tongue-and-groove (not over 4″ face width). Use hardboard, such as Armstrong Temboard Underlayment or ⅜″ DFPA plywood, grade BD or better. (See pages 47 and 48.)
3. Double wood floors. If boards are 3″ wide or more, proceed as (2), above. If less than 3″, renail loose boards and replace defective or badly worn boards with new material. Fill cracks and holes with plastic wood or snugly fitting wood pieces. Remove surface irregularities, such as cupping, by sanding.

Preparing old wood subfloors

Type of Subfloor		Hardboard	Plywood*
Single wood floor	Tongue-and-Groove	✓	⅜″ or heavier
	Not Tongue-and-Groove	Do not use	½″ or heavier
Double wood floor	Strips 3″ or more	✓	⅜″ or heavier
	Strips less than 3″	Renail or replace loose boards. Remove surface irregularities.	

Floors too uneven to be sanded smooth: hardboard, or ⅜″ or heavier plywood, or S-170 Flormastic.

* See page 48 for recommended types.

Wood floors, which are too uneven to be sanded smooth, should be covered either with hardboard, ⅜″ or heavier plywood, or a mastic-type floor fill made with Armstrong No. S-170 Flormastic.

Old wood floors to which a surface treatment, such as paint or oil, has previously been applied present a special problem. Such treatments tend to prevent the penetration of the adhesive into the wood and deprive it of bonding strength. All traces of oil or paint should be removed by sanding or scraping.

When the pores of any wood floor have been opened by sanding, too much penetration of moisture from the adhesive causes cupping of the floor boards. Immediately after sanding, therefore, a sealing compound such as Armstrong S-140 Floor and Wall Size should be applied and allowed to dry before spreading adhesive.

Concrete floors. The problem of securing proper adhesion to concrete subfloors usually arises from dampness, or from dusty, chalky, or flaky concrete surfaces and previous treatments with oils or other solutions. Dampness should be checked as described on page 18. Dusty, chalky, and flaky surfaces can usually be overcome by (1) thorough sweeping with a wire brush to remove all loose particles, and (2) removal of grease and oils and/or other surface coatings such as paint, varnish, or wax. These can be removed by sanding, paint and varnish remover, blowtorch, acetylene paint burner, or a strong solution of tri-sodium phosphate and water followed by a sealing treatment. When asphalt tile or Excelon Tile is to be installed, the sealer should be Armstrong No. S-80 Asphalt Primer. For all other resilient flooring materials on suspended concrete floors, apply Armstrong S-140 Floor and Wall Size. All cracks, minor holes, and crevices should be filled with Armstrong Crack Filler or a filler of equal quality. If concrete floors are too badly damaged to be repaired by crack fillers, the entire floor may be resurfaced with a fill made from Armstrong S-170 Flormastic, S-105 Underlayment Cement, or a concrete topping. Concrete topping, like new concrete floors, must be fully cured before installing resilient floors.

Special conditions. The above comments cover the most common conditions encountered with subfloors of wood and concrete. Other subfloors such as metal, terrazzo, and magnesite require special treatment which is dependent on individual circumstances. In such cases Armstrong will be glad to offer specific assistance.



To insure a proper bond for the adhesive, all paint must be removed. Because it helps to speed the removal of paint from large areas, the propane gas paint burner is often preferred for this type of work. However, machine sanding and chemical paint removers also do the job quickly and effectively.



Grease or oil coatings should be removed with a strong solution of tri-sodium phosphate or alkaline cleanser. Cleaning solutions should be thoroughly rinsed away. Where deep penetration of grease or oil cannot be removed from the subfloor, the installation of resilient flooring should be questioned.



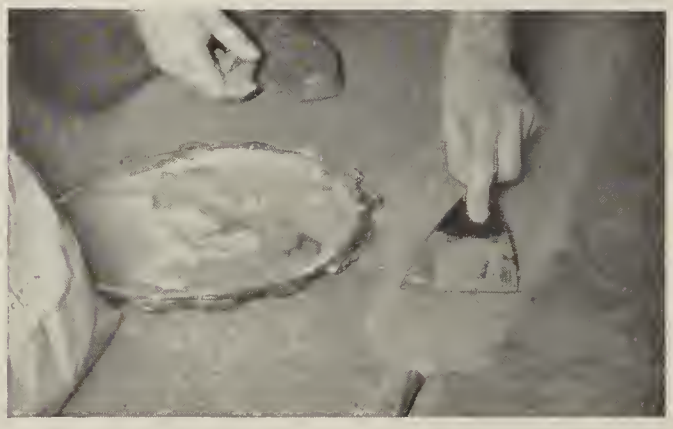
Surface defects in old double wood floors often damage or mar the finished resilient floor. This can be prevented by carefully renailing loose boards and sanding or planing warped areas to floor level. All badly damaged floor boards should be replaced. Sanded areas should be treated with No. S-140 Floor Size.



An underlayment, consisting of four-by-four-foot sheets of hardboard or plywood, is advised for uneven subfloor areas which cannot readily be corrected by sanding. When laid over a tongue-and-groove floor, this underlayment provides a sound and economical base for all types of resilient flooring.



Another method of resurfacing damaged wood and concrete subfloors is the use of a cold mastic floor fill. It can be laid directly over the old floor. Wood screeds and a straightedge may be used to maintain the thickness necessary for leveling. Cold mastic fills will not adhere to subfloors treated with oil.



Although resilient flooring adhesives will fill minor cracks and crevices in concrete subfloors, it is best that all holes, cracks, and crevices be filled with a reliable cement crack filler before installation is started. It is important that all concrete subfloors be allowed adequate drying time before installing flooring.

Selecting the right type of underlayment

Resilient flooring materials all tend to mold themselves somewhat to irregularities of the surface over which they are installed. This tendency, in addition to the more or less severe seasonal expansion and contraction of subfloors, makes it extremely important that the proper type of underlayment for the particular conditions is used. It is equally important that the underlayment is installed properly. Otherwise, the resilient finish floor may lose some of its attractive appearance or even split.

There are two main types of subfloor to be considered—concrete (or other monolithic floors, such as terrazzo, ceramic tile, or steel) and wood—and two main types of underlayment—board and mastic. Board-type underlayments are generally used to resurface wood floors. Mastic-type underlayments are used to level concrete subfloors.

Mastic-type underlayments. Mastic underlayments are of several kinds. The best use a binder such as asphalt or latex in the mix. Those which consist simply of a powdered mixture such as cement, gypsum, and sand, to which only water is added, all too often break down under traffic when applied in thin coats or featheredges. For some installations, either type will be satisfactory, but the latex-type underlayment, such as Armstrong No. S-105 Chemical-Set Underlayment Cement, is best where a thin fill is required. For best results, the maximum thickness is up to, but not more than, ⅛″. Any thickness greater than ⅛″ should be applied in two or more applications. It is easily troweled and can be featheredged very satisfactorily. It can be installed under most normal conditions, including installation over radiant-heated subfloors. However, latex underlayment should not be used when a solvent-type asphalt adhesive such as Armstrong S-80 and S-90 will be used to install the resilient floor.

The recommended asphaltic-type underlayment is made with Armstrong Flormastic, an asphaltic compound, mixed with Lumnite cement and aggregates, is both inexpensive and satisfactory under any normal conditions, including installations over radiant-heated subfloors. Except for occasional spots to be featheredged, the fill should be at least ⅜″ in thickness. However, Flormastic should not be used when the resilient flooring is to be installed with No. S-104 Cement.

It is important to remember that the subfloor must be free from surface treatments such as paint, oil, and varnish before a mastic-type underlayment is applied.

Board-type underlayments. The basic choice here is between hardboard and plywood. In most cases, it has proved satisfactory to use hardboard on remodeling work and plywood on new construction. The main reason for this is that the thinner hardboard type of underlayment avoids excessive building up of old subfloors. In new construction, on the other hand, it is often desirable to build up subfloors, and plywood serves this additional purpose well.

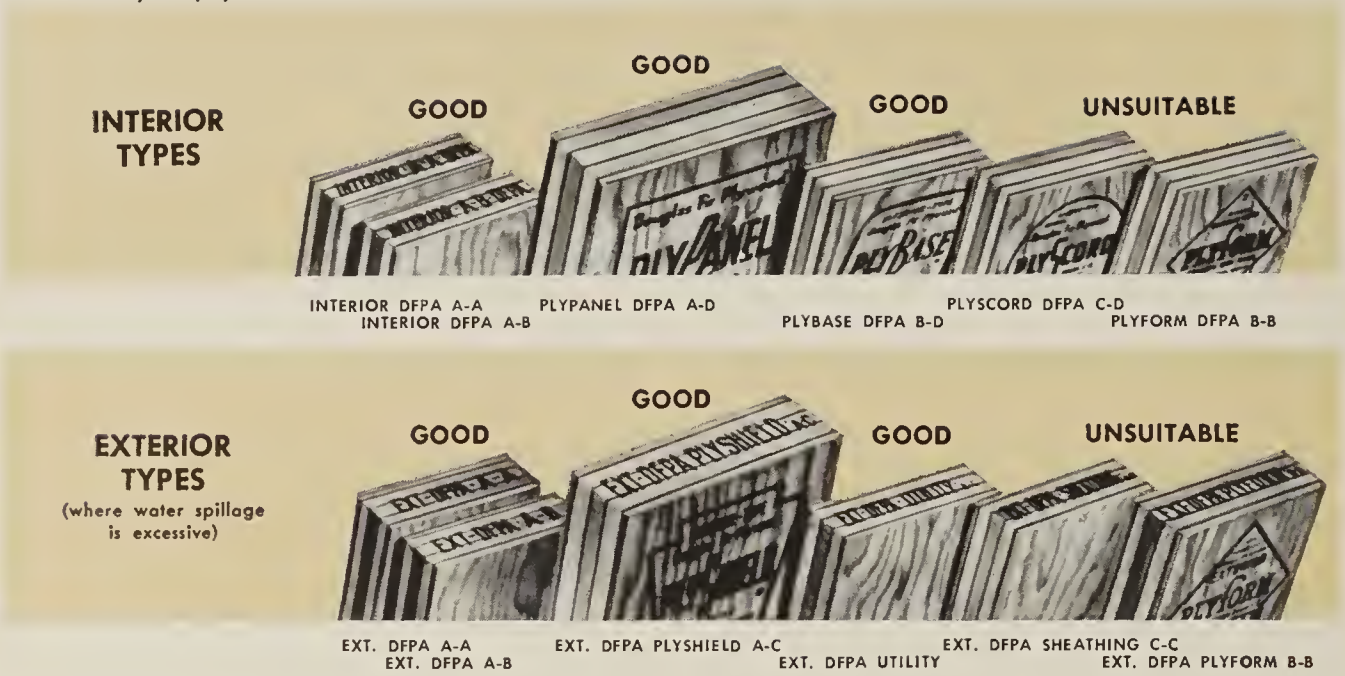


Over wood subfloors, galvanized chicken wire or expanded metal lath should be nailed to the floor to reinforce asphaltic-type underlayments. The wire netting allows the wood floor to expand and contract without damaging the floor fill.



A latex underlayment such as Armstrong S-105 Chemical-Set Underlayment Cement may be troweled to a thin "featheredge" in leveling worn or damaged areas of concrete subfloors. This often eliminates the need for complete resurfacing.

Suitability of plywood (DFPA) underlayments



Hardboard. The most suitable type of hardboard underlayment for wood subfloors is Temboard Underlayment, as recommended in Armstrong Specifications. This hardboard has been in use for many years as an underlayment for resilient floors and has proved satisfactory. Tempered hardboards should never be specified as underlayments for resilient flooring.

Plywood. This material has long been used satisfactorily as an underlayment. The general term "plywood," however, should always be qualified in underlayment specifications. Certain types of plywood made to DFPA ratings are most suitable as underlayment. (See chart, top of page.)

Where excessive water spillage occurs, such as around drinking fountains, at entryways, and on counter tops, exterior plywoods are recommended. A thickness of 3/8" should be used in all cases.

A new type of plywood, known as Novoply, is also suitable as an underlayment for resilient floors. This is a three-ply board having a low density granular wood core and outer facings of high density wood flakes.

A new type of plywood subflooring known as 2-4-1 as specified by DFPA is suitable as a base for resilient floors. However, surface irregularities should be smoothed out with plastic wood filler and sanded as required.



Joint spacing of 1/32" to not over 1/16" should be provided between sheets of hardboard or plywood underlayment to permit slight expansion and contraction with varying moisture conditions. The sheets should be laid with joints staggered.



Hardboard or plywood should be firmly fastened to the subfloor with coated or ring-grooved nails or approved staplers. Fasteners must not be over 4" o.c. in all directions and at edges and driven flush or 1/32" below the underlayment surface.

Adhesives for resilient flooring

The life and serviceability of any resilient flooring installation depend greatly upon the proper application of the correct adhesive which will meet its specific installation requirements. Frequently, the selection of the proper adhesive is as important as the selection of the floor itself. To bond properly, the adhesive must hold the flooring material to the subfloor by surface attachment. While the bonding strength must be great enough to prevent the separation of the flooring material from the subfloor under stresses slightly greater than those encountered in normal use, it must not be so strong that it will be too difficult to remove the resilient flooring later if necessary.

Factors to Be Considered

The type of subfloor, its condition, and the kind of resilient flooring material to be installed are important factors in the selection of the adhesive. Below-grade subfloors, for example, may require a different type of adhesive than suspended subfloors, and asphalt tile must be installed with a different adhesive than linoleum. The adhesive selected must also bond the resilient floor securely to the subfloor without chemical or physical damage to the flooring material. It should also be easy to handle and apply. It should develop and retain the correct "tack" or gripping power throughout the desired working period. The adhesive must have correct viscosity. If it is too thin, it will penetrate too deeply into the subfloor or the flooring and the bonding power will break down due to lack of sufficient adhesive at the surface. For this reason, resilient flooring adhesives should never be thinned except as specified by the manufacturer.

Because the various types of resilient floors available are designed to meet specific flooring requirements, it is necessary that the adhesive used in their installation meet the same requirements. As a guide in the proper selection of adhesives, the Armstrong Research and Development Center has prepared the chart shown on page 50.

Armstrong No. S-128 Paste is an all-purpose adhesive developed for the installation of lining felt, Cushion-Eze Underlayment, linoleum, linoleum tile, and sheet Vinyl Corlon. It should be used only on suspended subfloors. It has a sulphite liquor base and is water soluble.

Armstrong No. S-130 Resilient Tile Paste was formulated especially to simplify and speed the installation of Linotile, rubber tile, linoleum tile, and Custom Corlon Tile, over suspended subfloors. It develops a quick tack and keeps tiles from sliding or moving while mechanics walk over finished areas.

Armstrong No. S-235 Cement is a latex-type cement which is both alkali and moisture resistant. It is especially formulated for the installation of sheet Corlon with Hydrocord Back over on- and below-grade concrete subfloors. It is also recommended for installing rubber tile and Custom Corlon Tile over dry, well-cured on-grade concrete floors.

Armstrong No. S-80 Primer is used to minimize moisture as well as to seal porous and dusty concrete sub-



The bonding strength of any adhesive is determined by its cohesive strength as well as its adherence to both materials being bonded. The test above shows integral cohesion and adhesion between the subfloor and the flooring material.



To insure adhesives of uniform quality, the Armstrong Research Laboratories continually test the bonding strength of adhesives before and after "setting." The "stripping test," above, measures the bonding strength of the adhesive after setting.

Table of recommended adhesives for the installation of Armstrong resilient floors

Type of Resilient Floor	Wood, Hardboard & Plywood	Concrete Suspended	Concrete On Grade	Concrete Below Grade	Ceramic Tile, Terrazzo or Marble Suspended	Ceramic Tile, Terrazzo or Marble On Grade	Steel††	Magnesite	Floor Fill: Asphalt Type (Suspended)***	Floor Fill: Latex Type (Suspended)
Linoleum Sheet Corlon (with Armofelt Back)	S-128	S-128	Don't Install	Don't Install	S-235 or S-214	Don't Install	S-235 or S-214	Obtain Special Recommendation from Armstrong for Individual Projects	S-235 or S-214	S-128, S-214 or S-235
Sheet Corlon with Hydrocord Back	Use Corlon with Armofelt Back		S-235	S-235	Use Corlon with Armofelt Back	S-235	S-235		Use Corlon with Armofelt Back	
Linotile	S-130	S-130	Don't Install	Don't Install	S-235, S-214 or S-104	Don't Install	S-235, S-104 or S-214		Install Lining Felt with S-235 or S-214 Install Tile with S-130 Install Cork Tile over felt with S-214	S-130, S-214 or S-235
Rubber Tile and Custom Corlon Tile	S-130	S-130	S-104** or S-235	S-104	S-235, S-104 or S-214	S-104 or S-235	S-104, S-235 or S-214			S-130, S-214 or S-235
Cork Tile and Custom Vinyl Cork Tile	S-214	S-214	S-214*	Don't Install	S-214	S-214*	S-214			S-214
Linoleum Tile	S-130 or S-128	S-130 or S-128	Don't Install	Don't Install	S-214 or S-235	Don't Install	S-214 or S-235			S-130, S-128 or S-214
†Asphalt Tile and ⅛" Excelon Tile	S-160 or S-700	S-160, S-700 or S-90	S-160, S-700 or S-90	S-160, S-700 or S-90	S-160, S-700 or S-90	S-160, S-700 or S-90	S-160, S-700 or S-90	S-700 or S-80 Primer, and S-160	S-160 or S-700	S-160 or S-700
Service Gauge Excelon Tile	S-700 or S-90	S-700	S-700 or S-90	S-700 or S-90	S-700 or S-90	S-700 or S-90	S-700 or S-90	S-700 or S-80 Primer and S-90	S-700	S-700
Lining Felt• or Cushion-Eze Underlayment ★	*Must* for ⅛" hurlap back linoleum and most resilient tiles. *Optional* for all other sheet linoleum and Corlon, ⅛" Excelon and asphalt tile. Install with S-128	Optional for all floors. Install with S-128	Don't Install	Don't Install	Optional for all floors. Install with S-235 or S-214	Don't Install	Optional for all floors. Install with S-235 or S-214	Special Recommendation from Armstrong	Recommended for all resilient tile except asphalt and Excelon Tile. Install with S-235 or S-214	Optional for all floors. Install with S-128 or S-130

NOTE: S-1200 Corlex Cement should be used to install rubber cove base. S-245 Top-Set Cove Base Cement should be used to install asphalt cove base.

†Dusty and porous concrete subfloors should be primed with No. S-80 prior to the installation of asphalt tile or both types of Excelon Tiles with S-700, S-90 or S-160. Asphalt tile and ⅛" Excelon Tiles should be installed over lining felt on wood subfloors. S-80 Primer should not he used with lining felt. Where asphalt tile and both Excelon Tiles are installed direct to plywood, hardboard or steel, it is necessary to use S-80 Primer.

*All cork tile may be specified for certain grade-level installations where the floor surface of the concrete slab is at least 12" above grade level and the ground slope is away from the building. The subfloor should he well cured and visibly dry. The cork tile shall be installed with No. S-214 Waterproof Cement.

**Where the concrete slab is new and not completely cured or abnormal conditions exist, No. S-104 Chemical-Set Cement should be specified.

***For asphalt tile and Excelon Tile over on- or helow-grade asphalt type floor fill, use S-160 Emulsion or S-700.

•S-149 Lining Felt when used with Linotile, rubber tile, Custom Corlon Tile, and cork tile (all types). S-150 Lining Felt when used with felt-backed linoleum and sheet Corlon; must for linoleum tile and felt-backed Corlon Tile.

★Cusbion-Eze Underlayment should not he used under asphalt tile, Excelon Tile (vinyl-asbestos), cork tile, Custom Vinyl Cork Tile, rubber tile or Custom Corlon Tile.

††For application over other metal subfloors, obtain special recommendation from Armstrong.

floors for asphalt tile and Excelon Tile installation. It also prepares the subfloor for the proper adhesive selected for the installation of asphalt tile or Excelon Tile.

Armstrong No. S-90 Asphalt Cement is recommended for on- or below-grade installation of asphalt tile or Service Gauge or ⅛" Excelon Tile, especially if the subfloor is not fully cured or shows signs of dampness. It is a cut-back asphalt-type cement resisting alkaline moisture.

Armstrong No. S-160 Emulsion is an all-purpose adhesive for the installation of asphalt tile and Armstrong ⅛" Excelon Tile over suspended, grade-level, and below-grade subfloors. It is a water emulsion of asphalt and is resistant to both alkali and moisture.

Armstrong No. S-700 Brushing Cement is an asphalt-rubber-water dispersion. It is especially recommended for use with Service Gauge Excelon Tile and may also be used for asphalt tile and ⅛" Excelon Tile installed direct to concrete subfloors. It can be used on all types of subfloors and eliminates the need for lining felt.

Armstrong No. S-104 Chemical-Set Waterproof Cement is a special-purpose adhesive developed for the installation of Armstrong Rubber Tile and Custom Corlon Tile over on- or below-grade concrete.

Armstrong No. S-214 Cement is recommended for cork tile and Custom Vinyl Cork Tile on grade and suspended floors. It is also recommended for all resilient floors, except asphalt and Excelon Tile, where surface moisture is a problem.

Special Problems

Frequently, unusual conditions such as extra-high alkalinity in concrete or magnesite subfloors will necessitate special recommendations. In such instances, Armstrong will gladly furnish additional information to help determine the proper adhesive for the specific need.

Inspecting resilient floor installations

Flooring installations usually eall for no more than four inspeetions. First is the inspeetion of the subfloor prior to installation of the finish flooring. Then the materials should be inspeeted, followed by an inspection of the resilient floor during installation. Finally, the completed work should be inspected.

The following information, and the accompanying chart —which outlines the special faetors requiring attention for various types of subfloors and finish floors—should be helpful in timing inspeetions.

Inspection of Subfloors

The condition of the subfloor has an important bearing on the appearance as well as the life and serviceability of a resilient floor. Subfloor inspeetion should be made immediately before the installation of the finish floor.

New concrete subfloors. It is important that all new eonerete subfloors be thoroughly dry, elean, and eured to a hard, non-powdery finish. Dampness or a powdery surface will prevent effeetive bonding of the adhesive to the subfloor. Concrete subfloors should also be free of expansion joints, trowel marks, and other imperfeetions. A smooth subfloor is important, sinee irregularities will show on the surfaec of the resilient flooring material and high points will reeeive exeessive wear.

Old concrete subfloors. Inspeet for proper filling of holes, eraeks, and the leveling of uneven areas. The slab should be thoroughly dry and free from oil, paint, varnish, dirt, and other foreign matter. (For methods of preparing old conerete subfloors for resilient flooring, see page 45.)

New wood subfloors. Where resilient floors are to be installed over new wood subfloors, it is important to eheek the construction speeifieations against the manufaeturer's reeommendations as to eonstruetion with single, double, tongue-and-groove flooring, or hardboard or plywood underlayments. (See page 47 for reeommended underlaymcnts.) Major changes from the manufacturer's recommendations may call for individual reeommendations for the proper installation of the resilient floor seleeted. Armstrong representatives are always willing to provide assistance on such speeial reeommendations for Armstrong resilient floors.

Old wood subfloors. All loose boards should be renailed and all badly worn or damaged boards replaeed. Uneven areas should be sanded or properly filled with a floor fill. Sanded wood floors should be sealed to prevent warping due to absorption of moisture from adhesives. All previous finishes, oil, dirt, and foreign matter should be eompletely removed. (This subjeet is treated in more eomplete detail on page 45.)

Inspection of materials. Before the flooring contraetor starts the job, all resilient flooring materials to be used should be inspeeted for quality, eolor, and type as called for in the flooring eontract. Partieular attention should be given to the types of lining materials and adhesives to be used, especially if the eontraet agreement or the arehitectural speeifieations permit the use of underlayments and adhesives other than those recommended by the manufaeturer.

Inspection of the Installation

Poor workmanship, sueh as eareless eutting and fitting, is best eorreeted early in the job—and inspeetion of the resilient floor during installation ean avoid costly repair and eorreetion later.

One of the most important operations in the installation of linoleum, plastie sheet flooring, and the majority of resilient tiles is the "rolling" proeess. This should insure a smooth, even bond to the subfloor by getting rid of all air bubbles, ripples, and uneven areas. The time required for proper rolling should not be shortened in order to speed the eompletion of the job, as this operation is vital to a satisfaetory installation.

In areas where marbleized, Spatter or patterned linoleum or Corlon plastie sheet flooring is being used, partieular attention should be paid to seam matehing.

In resilient tile installations, all tile edges should be tight to the floor, and joint lines should be symmetrical and even.

Inspection of Special Installations

The preeeding paragraphs cover inspeetion details ordinarily encountered in cheeking resilient floor installations over wood and eonerete subfloors. The inspeetion of resilient floors over other types of subfloors—such as magnesite and metal—or of floors employing special teehniques—such as the use of metal strips in conjunetion with resilient floors for deeorative effeet—is governed by individual cireumstances. In sueh eases, where general instructions may not be adequate, it may be advantageous to call on an Armstrong representative for assistance.

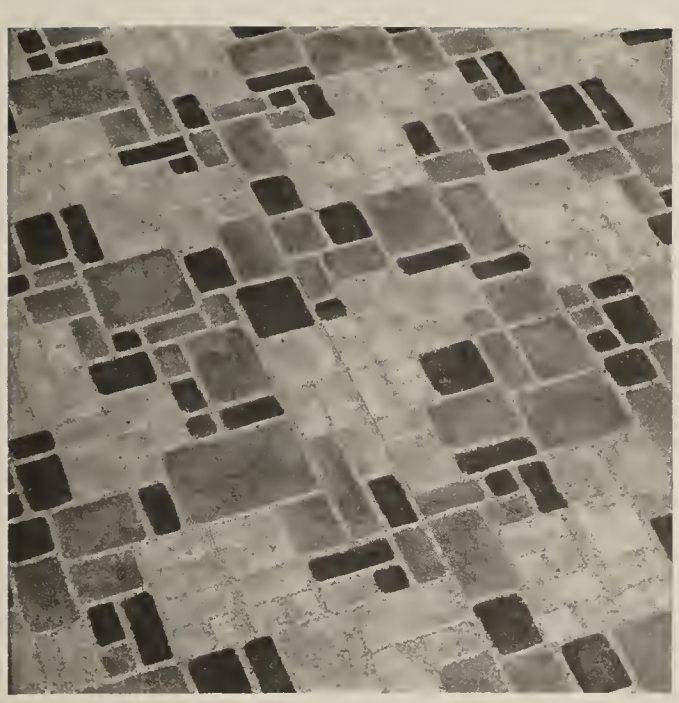
Factors important in resilient floor inspection

PRE-INSTALLATION INSPECTION

Type of Subfloor	Inspect for	Floor Should Be
NEW CONCRETE	Proper curing and drying. Moisture or dampness.	Free of expansion joints, and trowel marks, grease, dirt, or foreign matter. Free of imperfections. Hard, dry, and non-powdery.
NEW WOOD	Compliance with flooring specifications of maker as to construction in single, double, tongue-and-groove flooring or board-type underlayment.	Smooth, dry, and free from grease, dirt, or foreign matter.
OLD CONCRETE TERRAZZO CERAMIC TILE	Soundness, dryness, and necessary repair.	Level, free from cracks, holes, paint, varnish, and other finish. Also free from oil, dirt, and other foreign matter.
OLD WOOD	Renailing, replacement of worn or damaged boards, necessary filling of holes and cracks.	Sanded smooth, free of paint, varnish, oil, or other foreign matter.

INSTALLATION INSPECTION

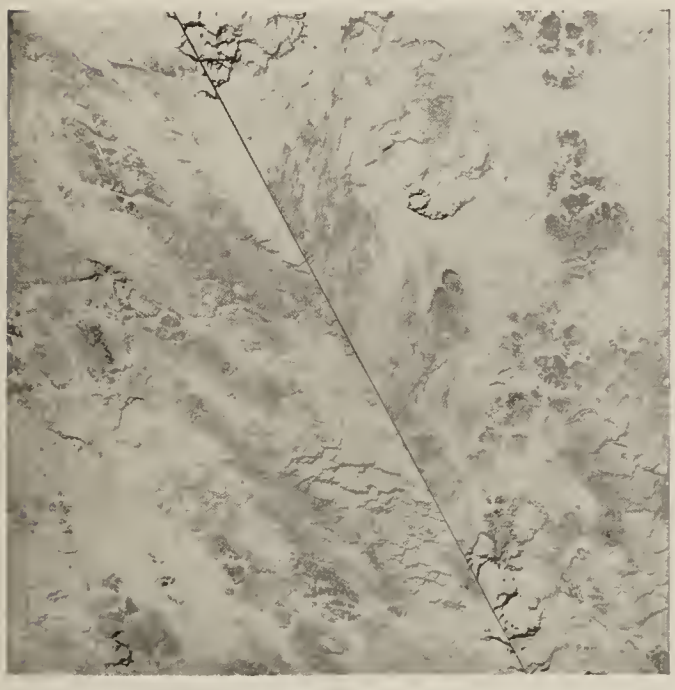
Type of Resilient Floor	Inspect During Installation for	Check Finished Floor for
LINOLEUM CORLON (Sheet type, all backings)	Proper installation of lining felt or Cushion-Eze Underlayment when required. Proper matching of pattern at seams. Neat cutting and fitting, around pipes and fixtures. Thorough rolling.	Over-all appearance. Air bubbles caused by poor rolling. Open seams. Proper cleaning and waxing.
ASPHALT TILE EXCELON TILE RUBBER TILE CUSTOM CORLON TILE CUSTOM VINYL CORK TILE LINOTILE LINOLEUM TILE	Symmetrical joint lines. Open joints. Poor tile laying such as adhesive between tile joints. Thorough rolling of rubber tile, Custom Corlon Tile, Custom Vinyl Cork Tile, linoleum tile, and Linotile. Neat cutting and fitting.	Over-all appearance. Raised joints. Open joints. Loose tile. Proper cleaning and waxing.
CORK TILE	Symmetrical joint lines. Proper finishing where unbeveled and unfinished cork tile are used. Thorough rolling.	Over-all appearance. Smooth surface. Open joints. Proper cleaning and special waxing.



An example of perfect workmanship in seam cutting and pattern alignment. Note how the over-all effectiveness of the floor design is greatly increased by proper matching of the repeat unit of the design. The floor in the photograph at left has a joint between two pieces of linoleum running diagonally from top to bottom through the center of the picture. The joint is barely noticeable because of excellent workmanship.



All joints or seam lines should be symmetrical. Uneven lines, such as illustrated at right, mar the appearance of both linoleum and resilient tile floors. This condition is more likely to occur in resilient tile installations. Armstrong resilient tiles are die-cut to a perfect square which eliminates this condition provided the flooring mechanic has squared the room before starting the installation and has laid the tiles carefully.



For the proper appearance of Marbelle, Royelle, Decoray, Spatter, and Jaspé linoleum installations, the sheets should be "reversed" or turned end for end. This gives a continuous flow to the graining and eliminates the optical illusion of "raised seams," shown here. The same principle applies to Textelle and Imperial linoleum to assure best pattern appearance.

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COLOR VALUES

For accurate color matching, it is recommended that actual samples of material be used. Because of color printing limitations, we cannot guarantee exact duplication of color values shown in this book with those of the actual goods.



PLAIN Features rich solid colors which are beautiful in all-over floor effects or as contrasting feature strips with other types of linoleum.*Pages* 58–59

JASPÉ Has a multitone striated graining which blends well with all types of interior design*Page* 61

MARBELLE Distinguished by a non-directional graining which conceals dust and dirt*Pages* 62–64

EMBOSSED INLAID This exclusive Armstrong flooring is made by slightly depressing some portions of the design. Other portions stand out in relief*Pages* 65–78

LINOLEUM

IMPERIAL An entirely new effect distinguished by a unique "burl" design*Pages* 79–81

CRAFTLINE INLAID Presents a distinctive textured styling. A variety of colorful patterns ...*Pages* 82–83

DECORAY Bold sweeps of color characterize this smart floor. The striated design is also practical, prevents dust from being noticed.*Pages* 84–85

TEXTELLE Closely related color tones are combined in this floor to produce a feeling of unusual depth. Offers a large, yet softly textured flagstone effect*Pages* 86–89

SPATTER One of today's most popular floor stylings, Spatter has a multicolor dot design which blends well with any decorative scheme*Pages* 90–93

ROYELLE Features large sweeping veins of color. Excellent for areas where a maximum amount of rich color is desired*Pages* 94–95

Southwestern Bell Telephone Co., Oak Cliff Office Building, Dallas, Texas
Floor: Armstrong Textelle Linoleum
Architect: Architectural and Engineering Department,
Southwestern Bell Telephone Co.



20 Brown — heavy (1/8") and standard gauge

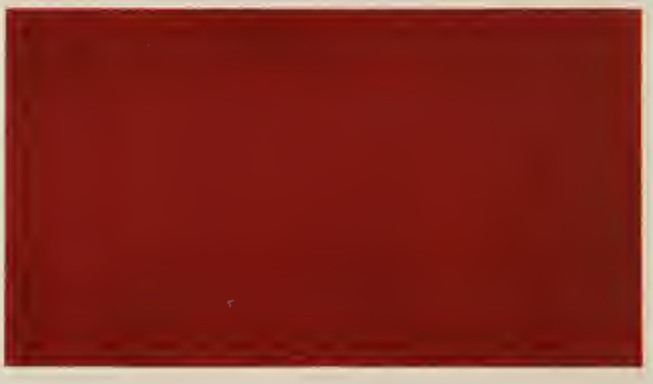




21 Evergreen — heavy (1/8") and standard gauge



22 Dark Gray — heavy (1/8") gauge only



25 Terra Cotta — heavy (1/8") gauge only

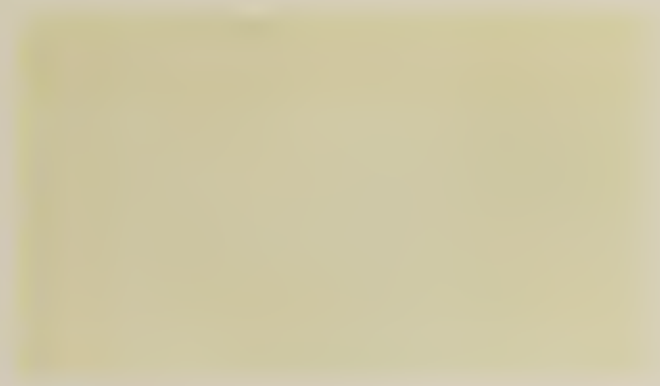


27 Black — heovy (1/8")* and standard gauge*

Armstrong Plain Linoleum is distinguished by its smooth, even surface and deep uniform coloring. It is often used in areas where a striking single or contrasting color effect is desired; but more frequently it is used for special single color insets, feature strips, or borders to accent other types of linoleum floors. It is made in the five Regular or "battleship" colors shown here and in seven special colors shown on page 59. The special colors are slightly higher in price than the regular colors.

Armstrong PLAIN LINOLEUM

2 yards wide and 1" Linostrips
* olso made in border material 6", 9", and 12" wide



heavy (1 8″) and standard gauge

White 23



standard gauge only

Pearl Gray 24



standard gauge only

Cerulean Blue 34



standard gauge only

Chinese Red 39*



standard gauge only

Fawn 45



standard gauge only

Canary Yellow 48



standard gauge only

Pink 50

Armstrong Plain Linoleum is available in one-inch-wide Linostrips in all colors and gauges listed, with the exception of Chinese Red No. 39, which is offered in both standard gauge and 1/8″ Linostrips. Border material in 6″, 9″, and 12″ widths is available only in Plain Black Linoleum 27 and in black Marbelle Linoleum 021. In addition, border material in any width ranging from 3″ to 24″ can be furnished to order in any available color or gauge of Plain, Jaspé, Decoray, Royelle, Marbelle, and Spatter Linoleum in rolls measuring up to thirty feet in length.

Armstrong PLAIN LINOLEUM

2 yards wide and 1″ Linostrips
* also made in heavy (1/8″) Linostrips



415 Blond Tan



416 Mist Green



420 Brown

Armstrong Desk Top Linoleum is made for use on desks, tables, counters, and other work areas.

Armstrong Desk Top Linoleum has a satin-smooth finish especially developed for use on these areas. In addition, all patterns except Brown No. 420 are lacquered, which makes Desk Top Linoleum easy to keep clean.

Armstrong Desk Top Linoleum is made in five colors—three plain patterns and two Jaspé stylings. The Jaspé patterns are pastel in color and are made to combat eye fatigue. Armstrong Desk Top Linoleum is made in rolls 2 yards wide. It is .080″ in thickness and has a cotton backing.



421 Green



426 Gray

Armstrong DESK TOP LINOLEUM

2 yards wide



heavy (1/8") gauge — Apple Green 1



heavy (1/8") gauge — Light Taupe 4



heavy (1/8") gauge — Driftwood Gray 13



heavy (1/8") gauge — Malay Brown 16

Armstrong JASPÉ LINOLEUM

2 yards wide

Reproductions approx. 1/3 actual size



03 standard and service gauge



08 heavy (1/8"), standard, and service gauge

Armstrong Marbelle features an unusual swirl marbleization which is ideal for both residential and commercial use. This swirl pattern tends to conceal tracked-in dust and dirt until the floor can be cleaned by sweeping or damp mopping.

In addition to its unique design effect, Armstrong Marbelle Linoleum offers the same practical advantages characteristic of the other stylings in Armstrong Linoleum. It is completely greaseproof, and for this reason is highly recommended for use in kitchens and dining rooms. The smooth, virtually seamless surface of this flooring is easy to keep clean.

Armstrong Marbelle Linoleum is also ideal for custom-designed floors. It forms a perfect background for insets of all types featuring other stylings of linoleum. Each coloring in the Marbelle line is especially designed so that it can be used with other Marbelle colorings. Striking floor effects are possible by using two or more colorings of this floor in one area.



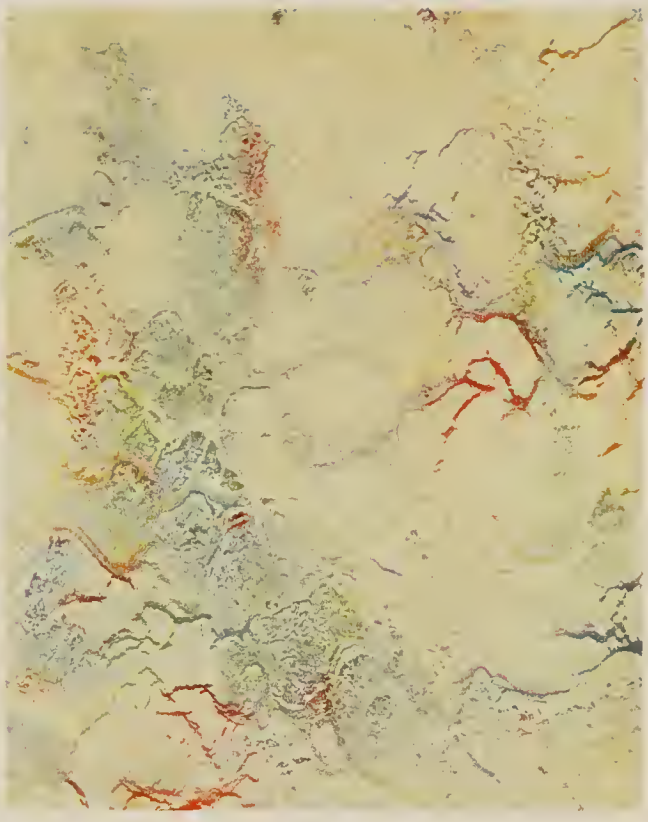
09 heavy (1/8"), standard, and service gauge

Armstrong MARBELLE LINOLEUM

2 yards wide
Reproductions approx. 1/3 actual size



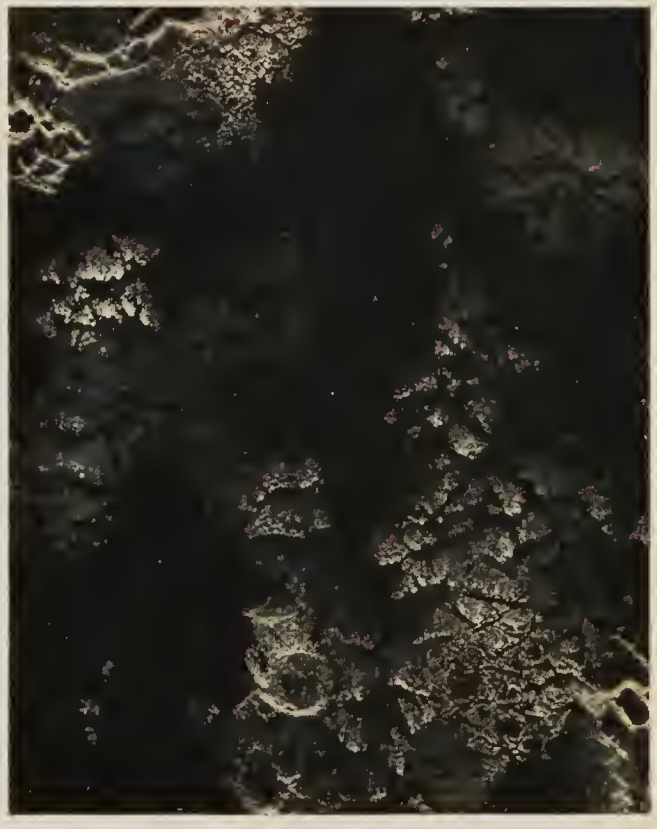
heavy (1/8"), standord, and service gouge 014



standard ond service gauge 015



heovy (1/8") gauge only 018



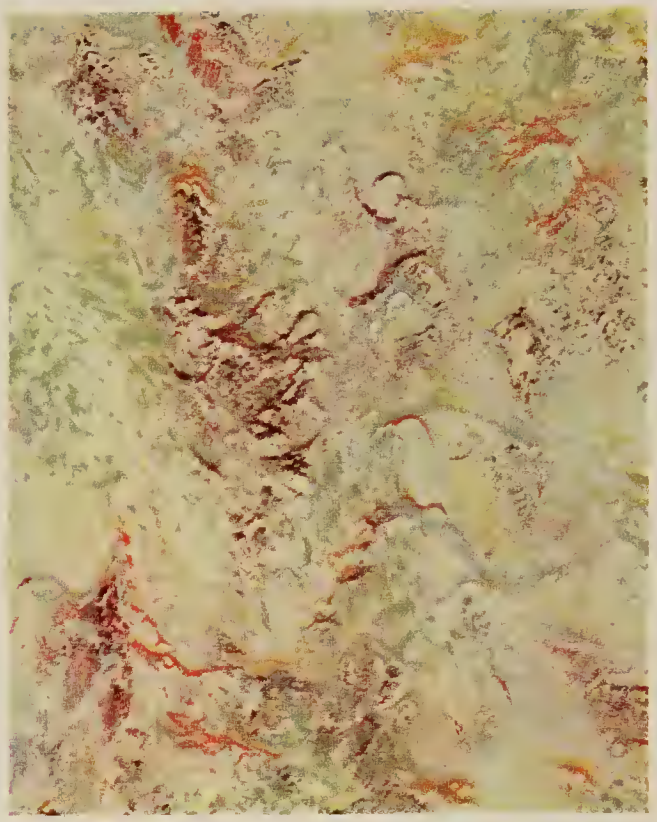
heovy (1/8")*, standord*, and service gauge 021

Armstrong MARBELLE LINOLEUM

2 yards wide
* also made in barder material 6", 9", and 12" wide
Reproductions approx. 1/3 actual size



029 standard and service gauge



030 heavy (1/8"), standard, and service gauge



036 heavy (1/8") gauge anly



042 standard and service gauge

Armstrong MARBELLE LINOLEUM

2 yards wide

Reproductions approx. 1/3 actual size



standard gauge

5300



standard gauge

5310

Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



5321 standard gauge

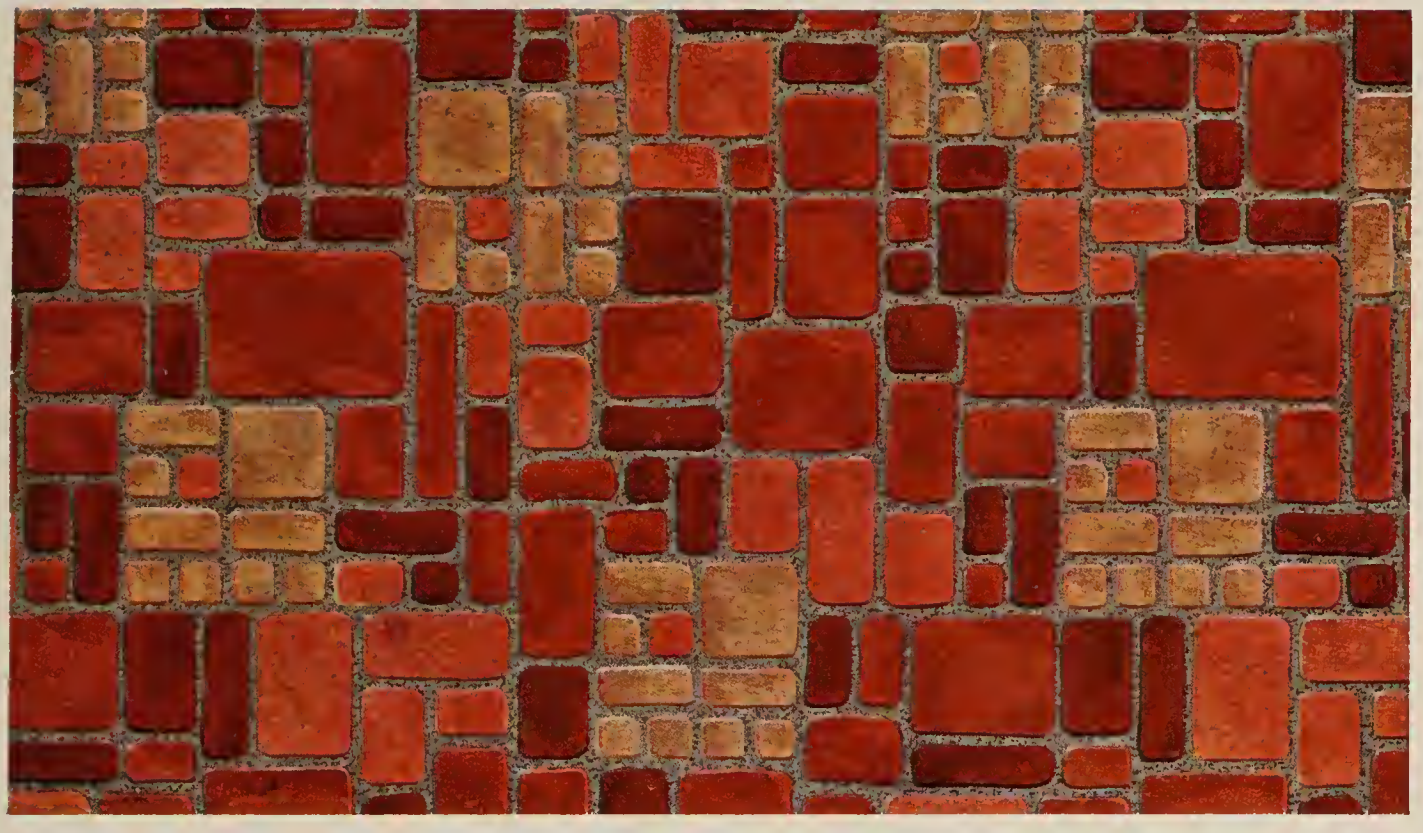


5351 standard gauge

Armstrong EMBOSSED INLAID LINOLEUM

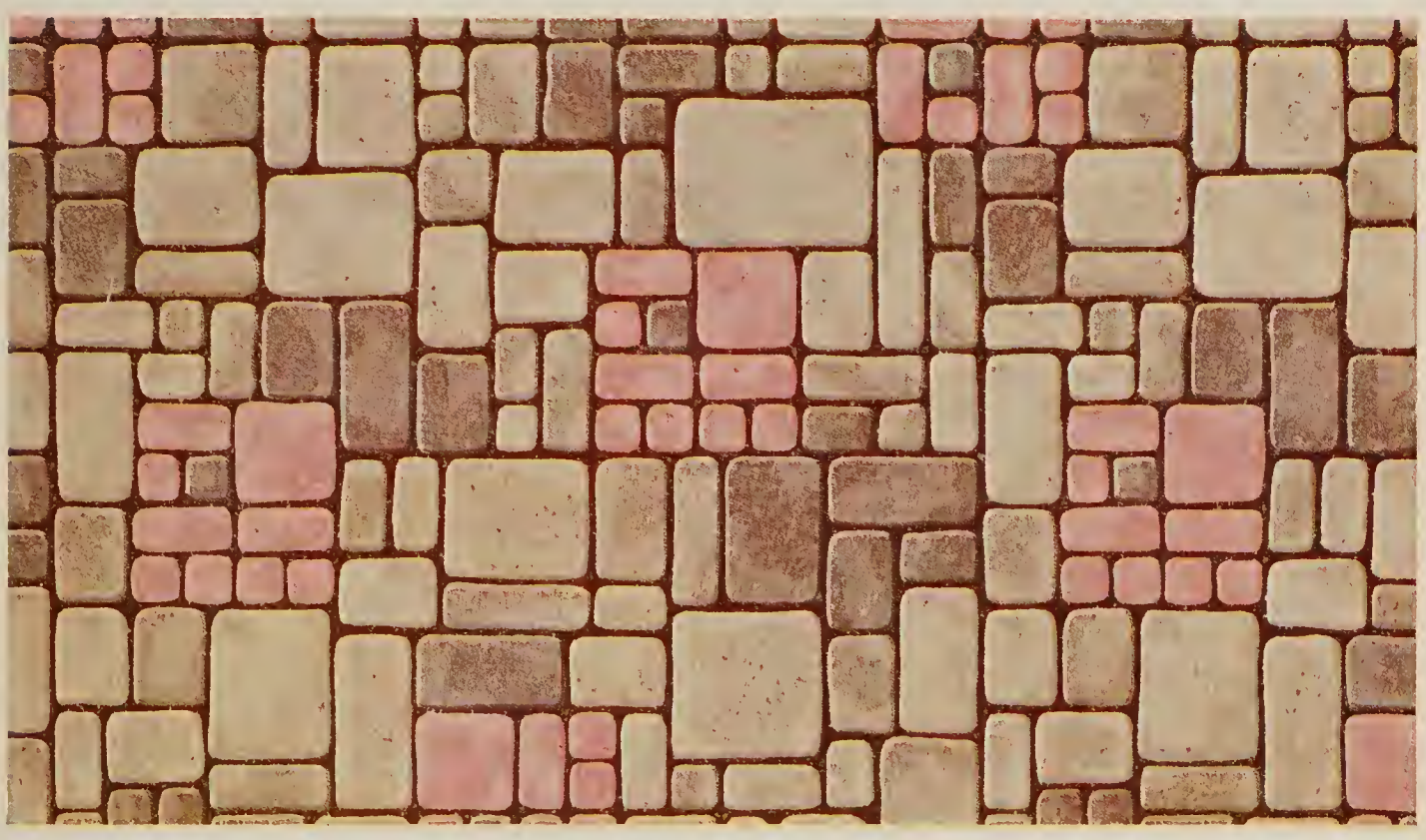
2 yards wide

Reproductions approx. 1/4 actual size



standard gauge

5352



standard gauge

5353

Armstrong EMBOSSED INLAID LINOLEUM

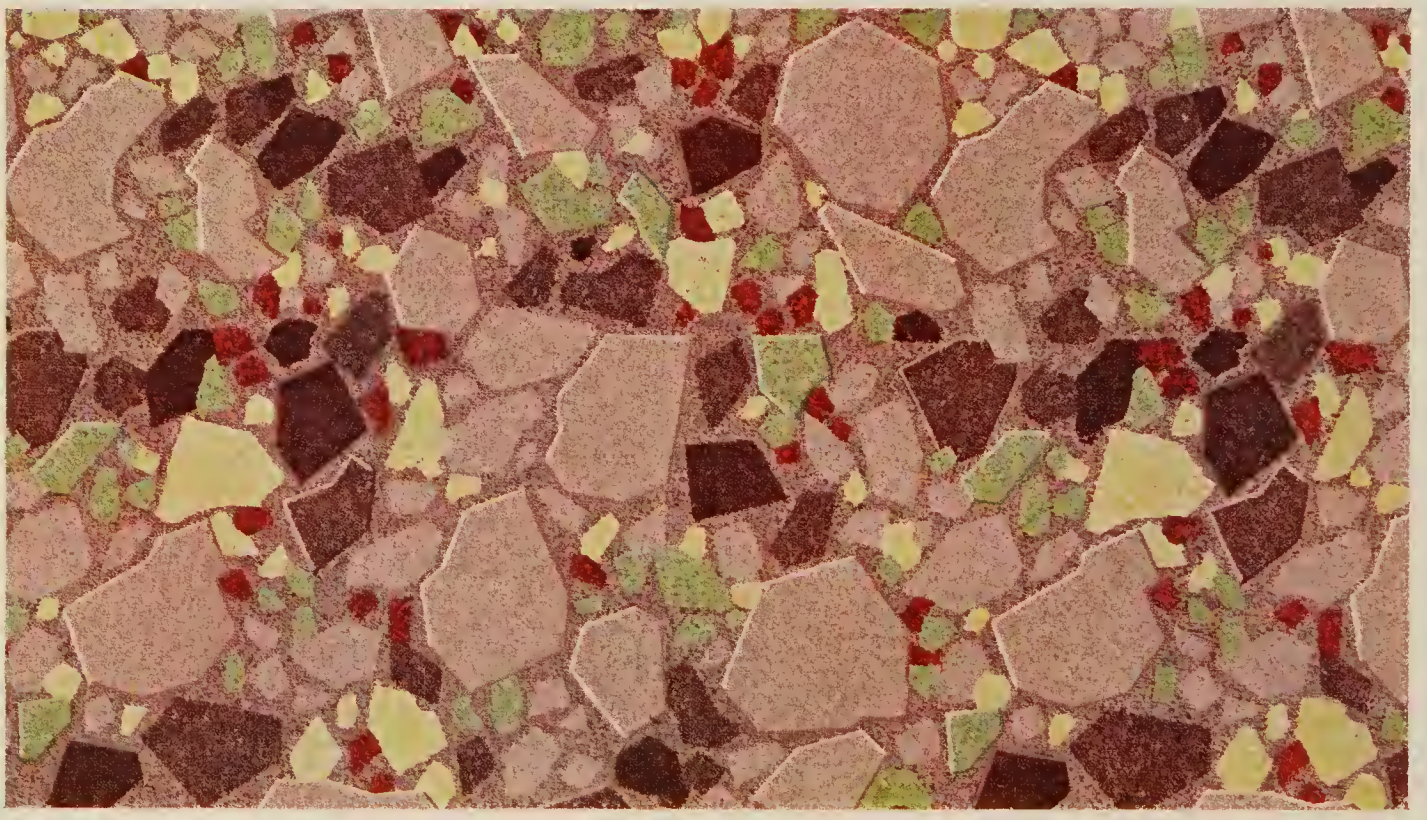
2 yards wide

Reproductions approx. 1/4 actual size



5390

standard gauge



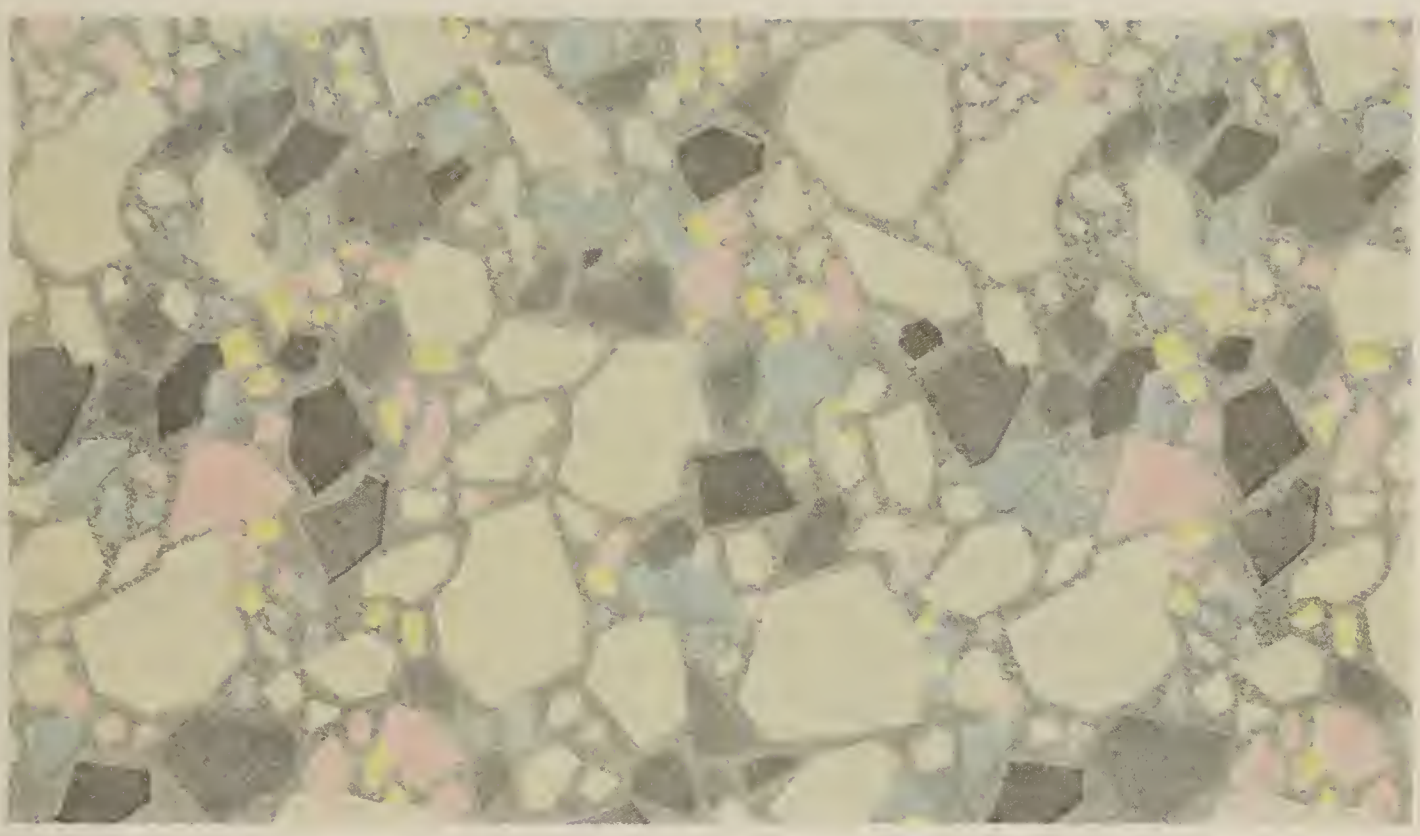
5393

standard gauge

Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



standard gauge

5394



standard gauge

5500

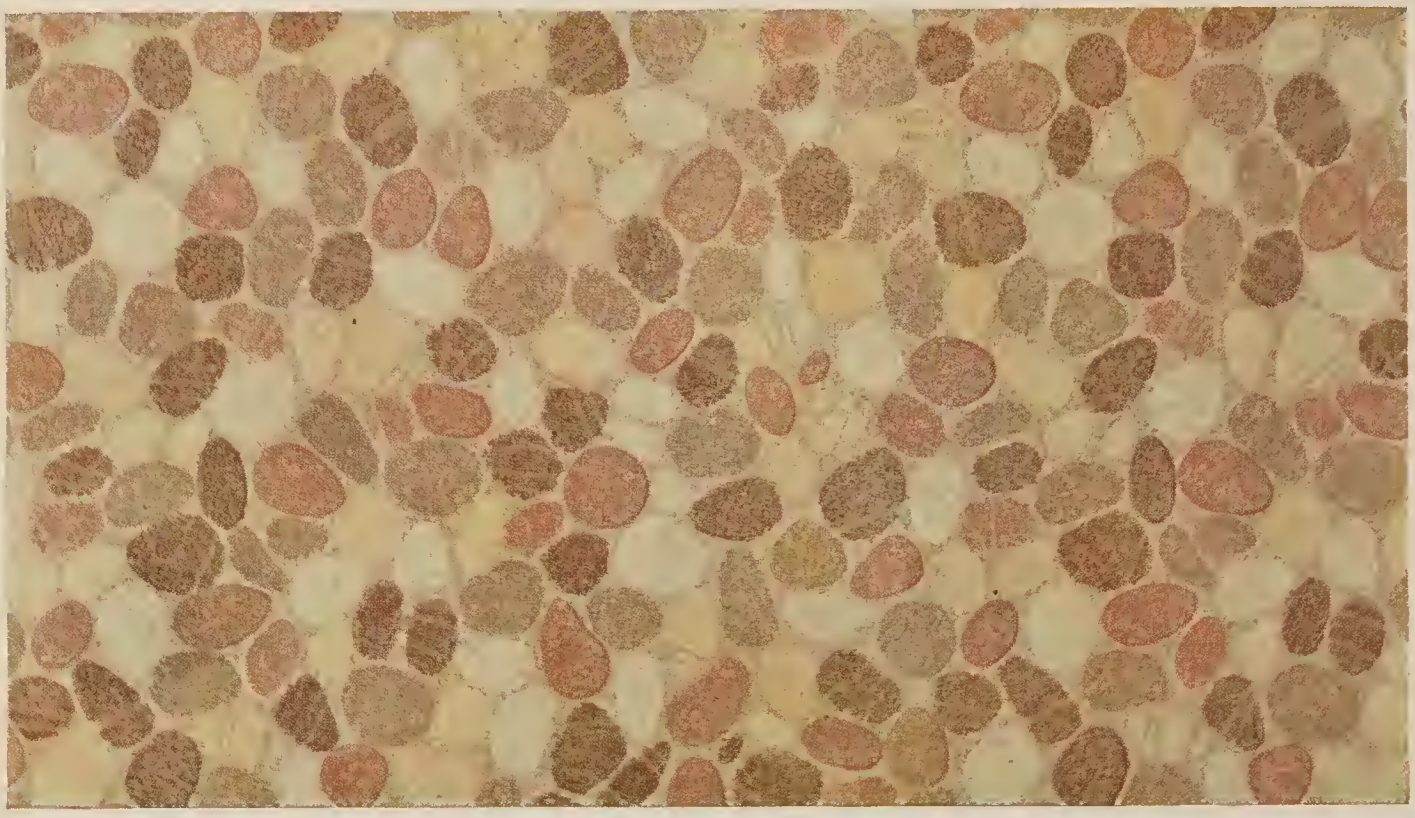
Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



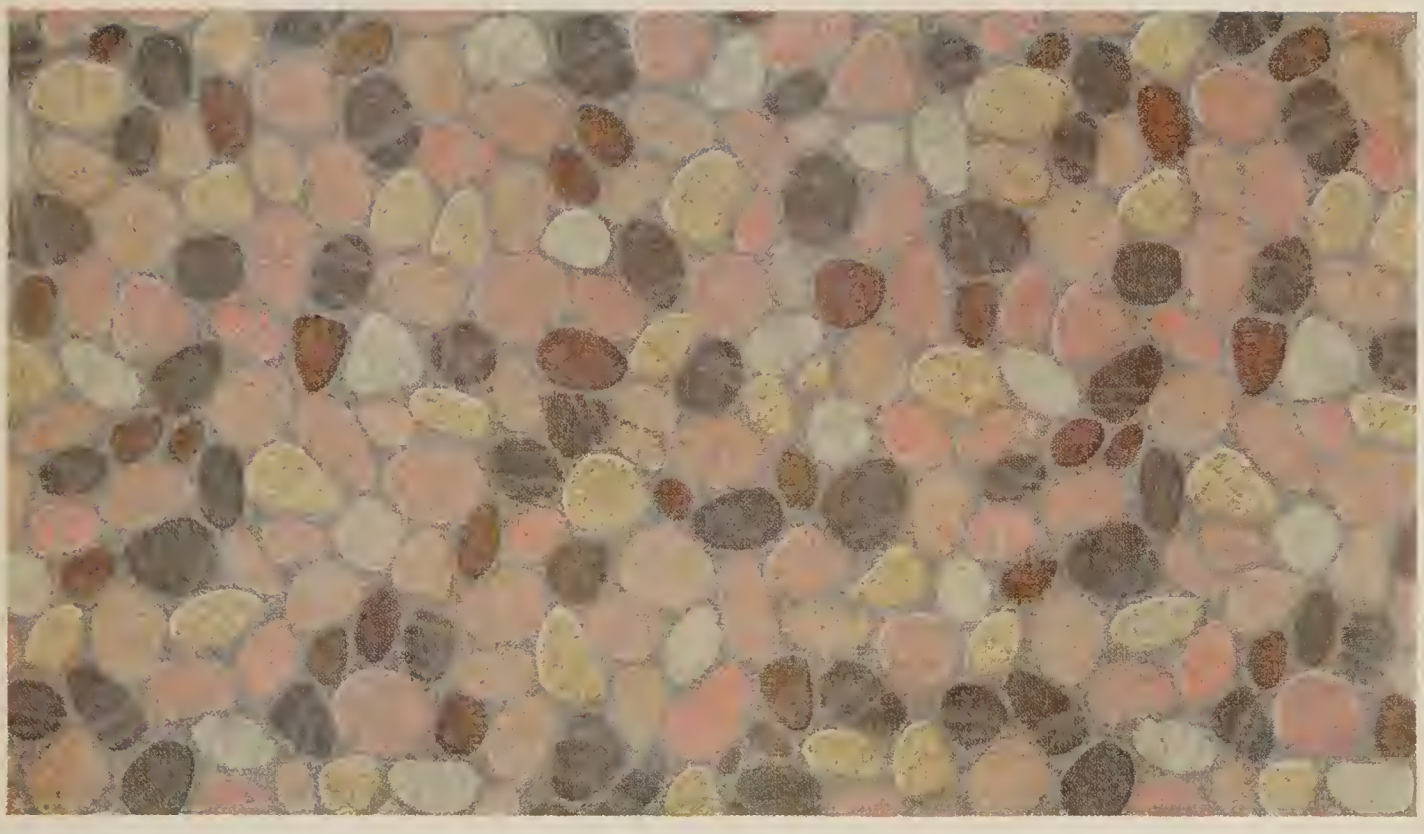
5501 standard gauge



5510 standard gauge

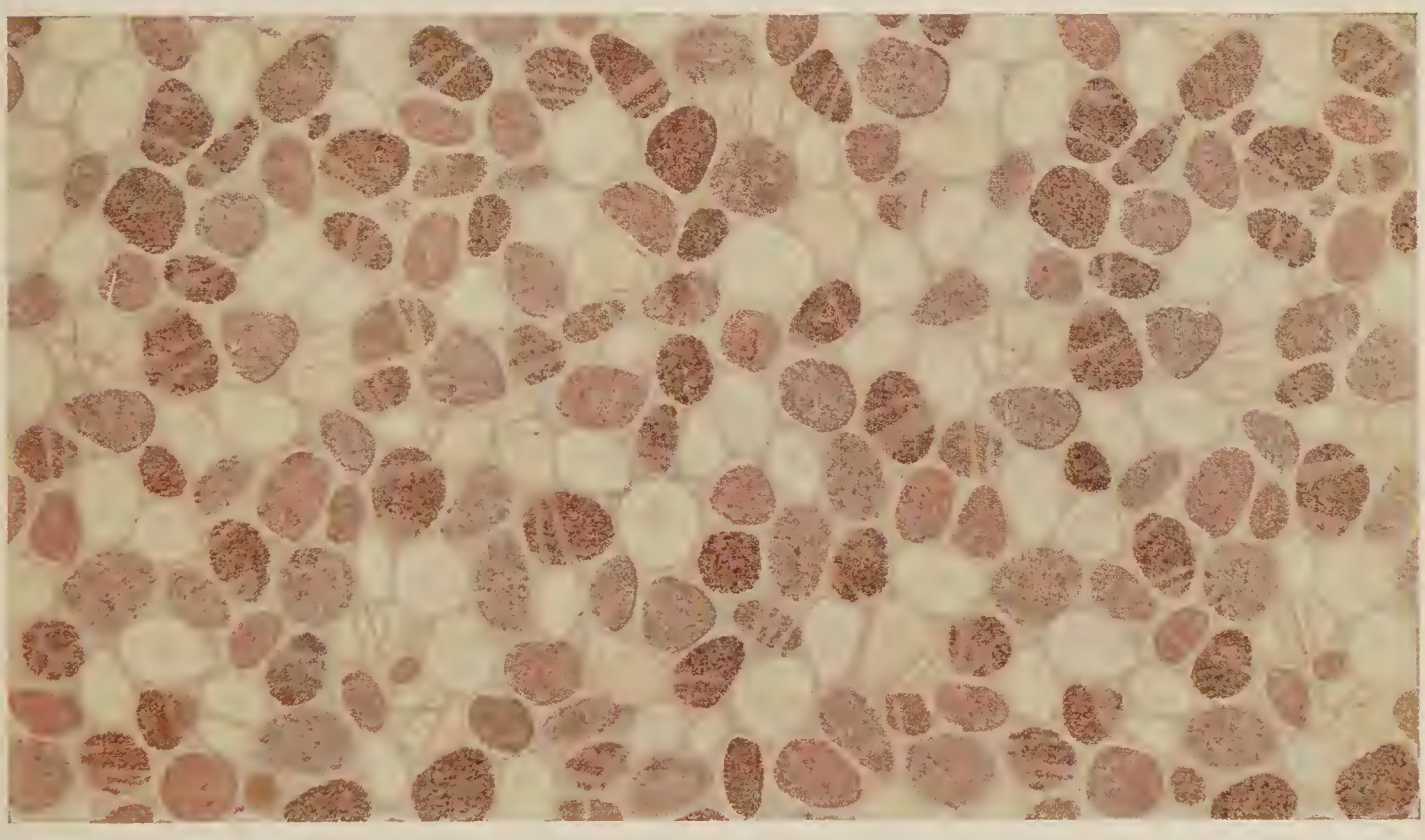
Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide
Reproductions approx. 1/4 actual size



standard gauge

5511

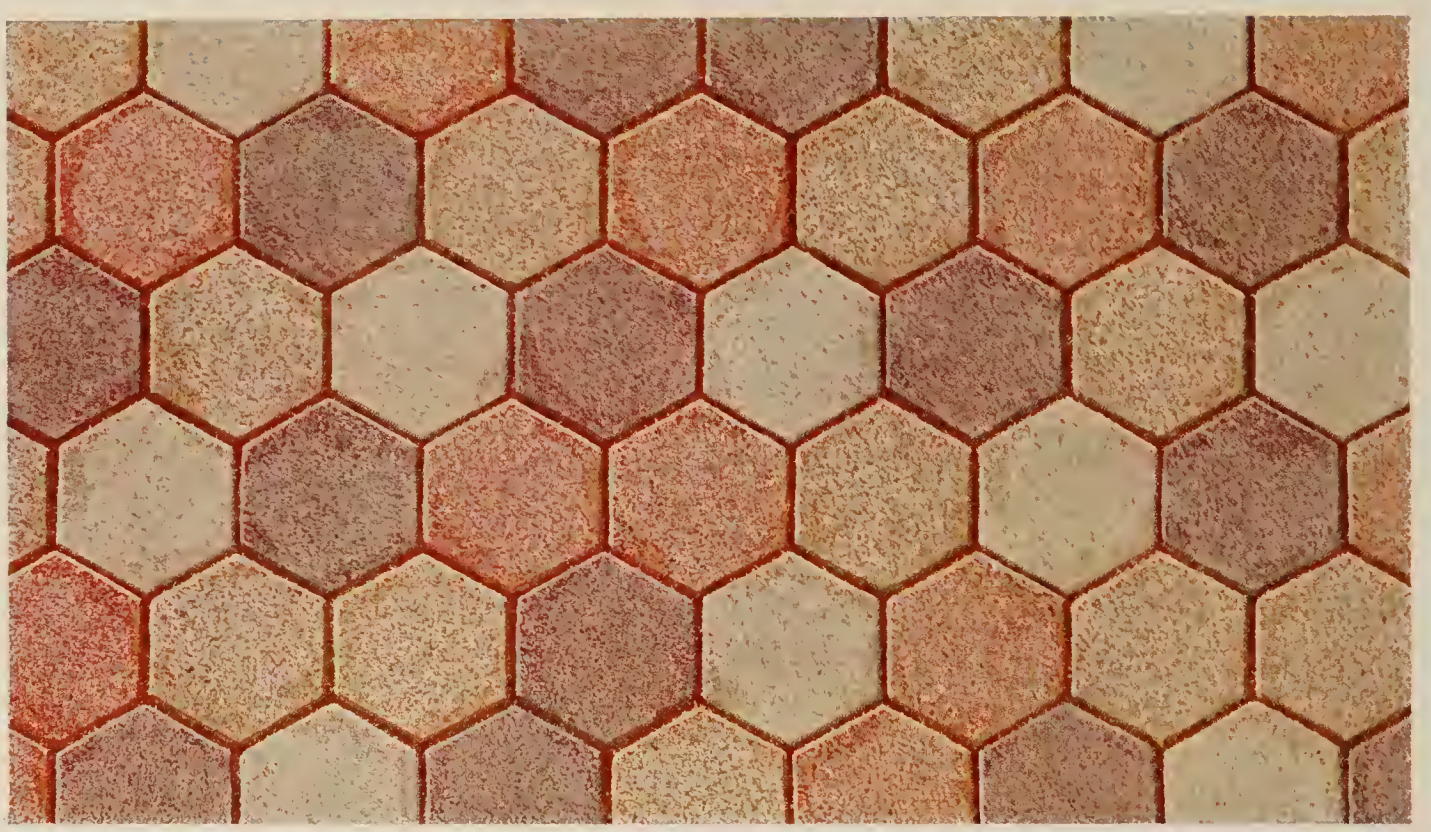


standard gauge

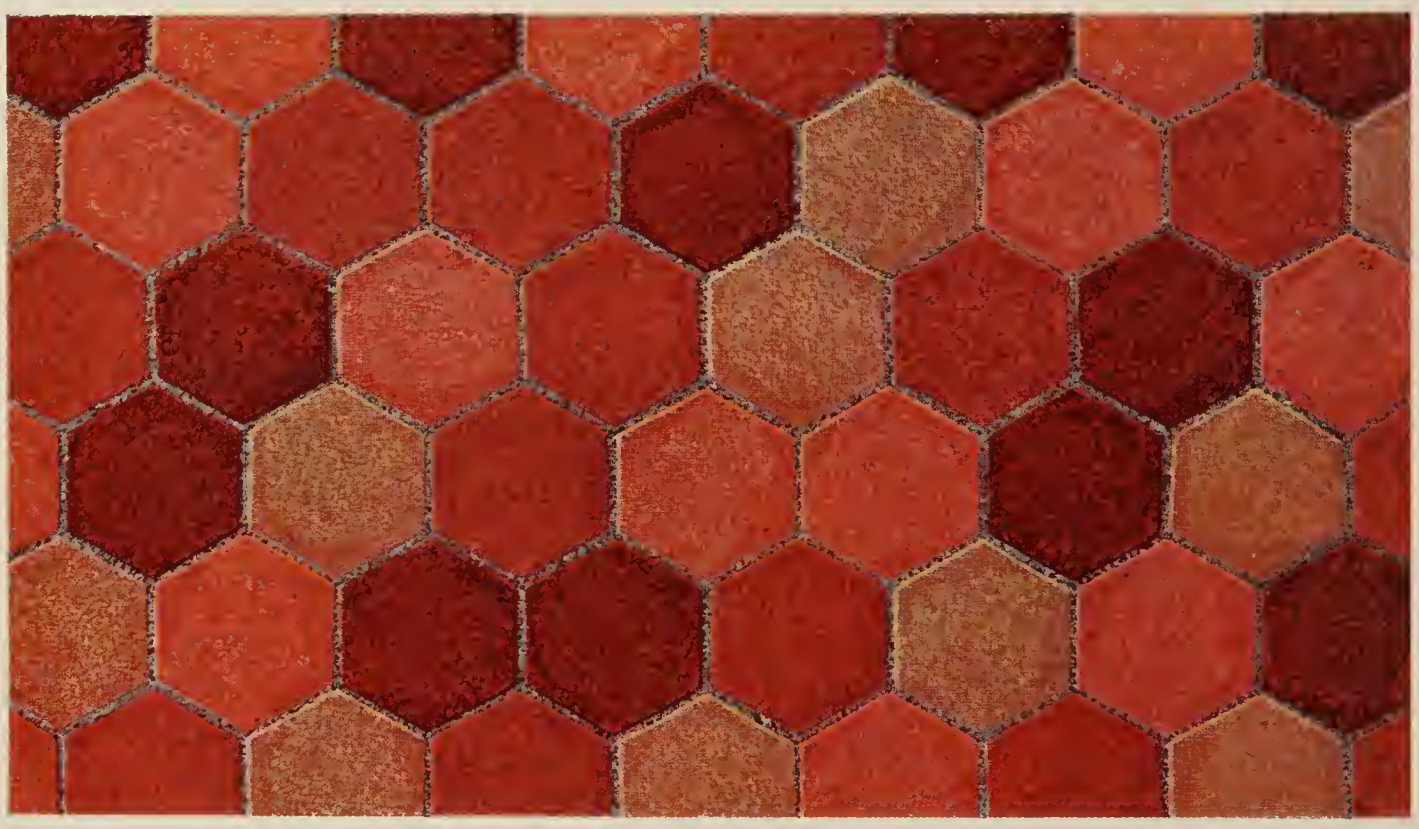
5512

Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide
Reproductions approx. 1/4 actual size



5520 standard gauge



5521 standard gauge

Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



standard gauge

5530



standard gauge

5540

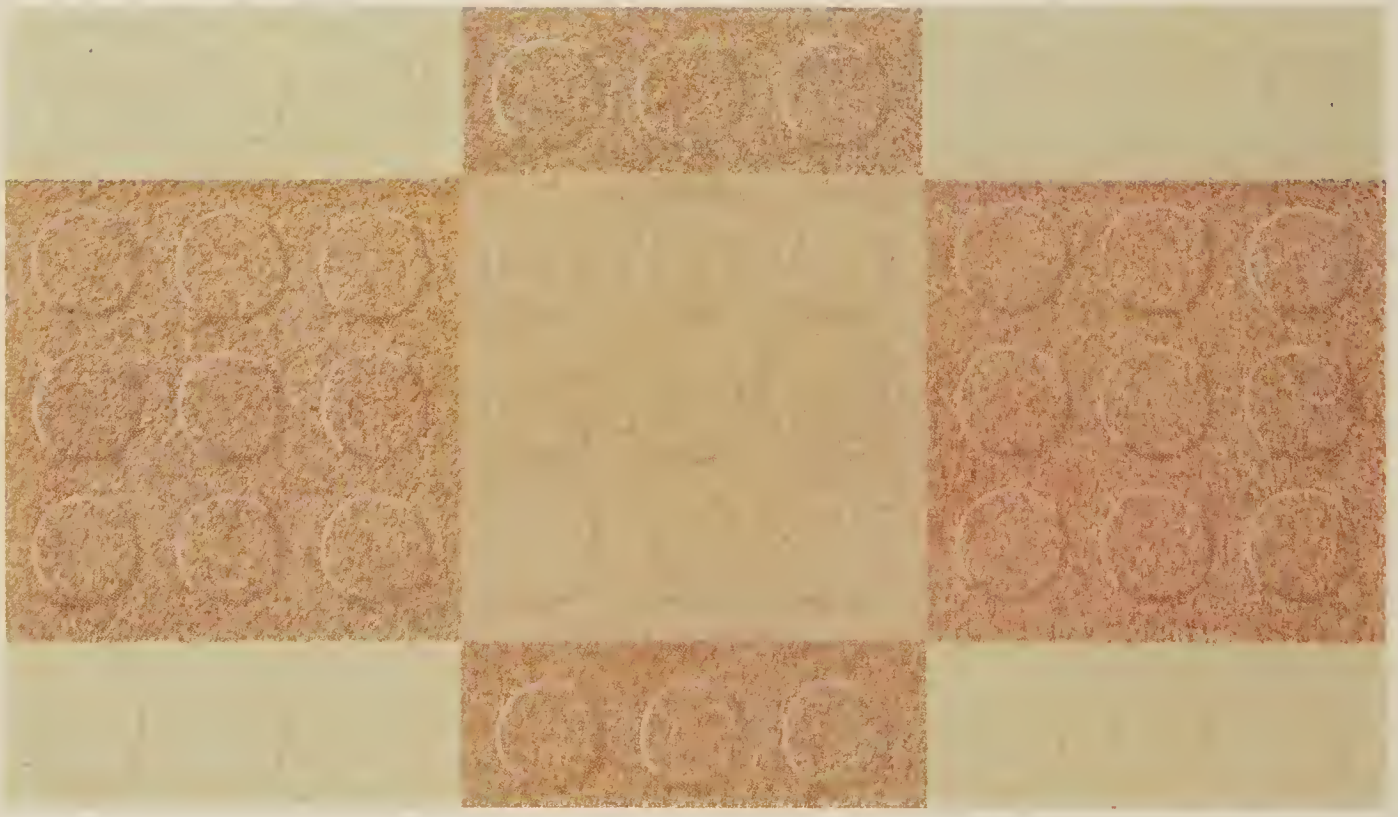
Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



5541 standard gauge



5550 standard gauge

Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



standard gauge

5551



standard gauge

5570

Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



5571 standard gauge



5580 standard gauge

Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide
Reproductions approx. 1/4 actual size



standard gauge

5581



standard gauge

5792

Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



5793

standard gauge



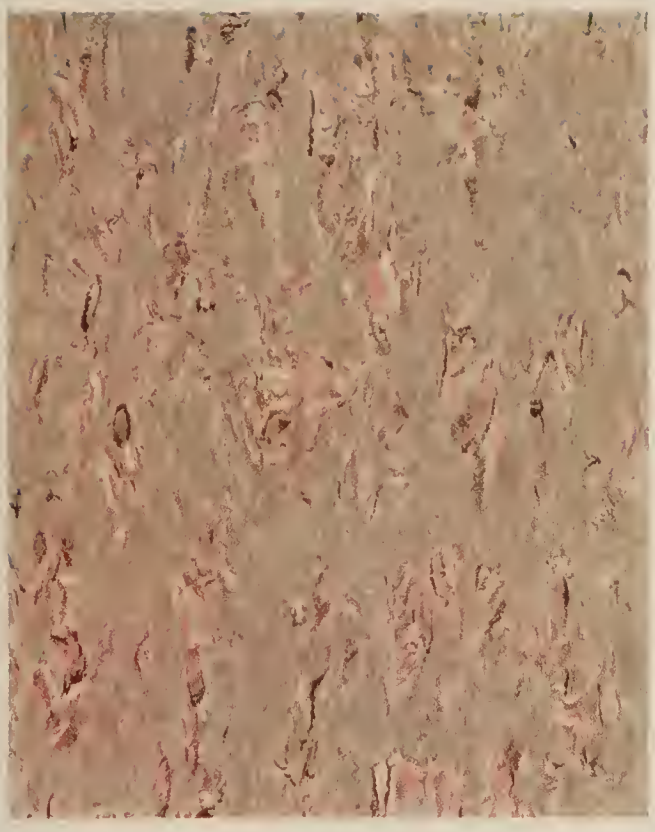
5796

standard gauge

Armstrong EMBOSSED INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



heavy (1/8") and standard gauges 1600



heavy (1/8") and standard gauges 1601



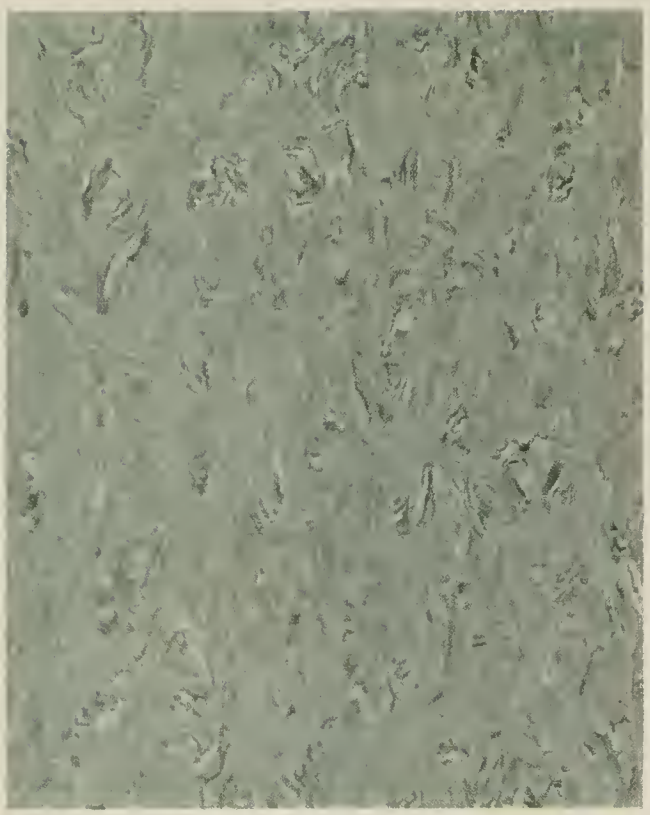
heavy (1/8") and standard gauges 1602

Armstrong Imperial Linoleum brings an entirely new concept to luxury floor stylings. Its unique appearance is created by thousands of small chips of color in an unusual burl-like design. A subtle, yet distinct contrast is achieved by the arrangement of different tones of color on a richly colored field. This multi-toned effect makes Imperial Linoleum suitable for use with a great variety of interior color schemes.

In over-all effect, Armstrong Imperial Linoleum presents a small-scale design which is beautiful in either a large or small area. It is offered in 6′ rolls which make it possible to have floors nearly free of seams.

Armstrong IMPERIAL LINOLEUM

2 yards wide
Reproductions approx. 1/2 actual size



1603 heavy (1/8") and standard gauges



1604 heavy (1/8") and standard gauges

A unique burl-like design makes Armstrong Imperial Linoleum an especially practical floor. The unusual design of this new floor styling tends to conceal dust and dirt until it can be whisked away with a broom or damp sponge.

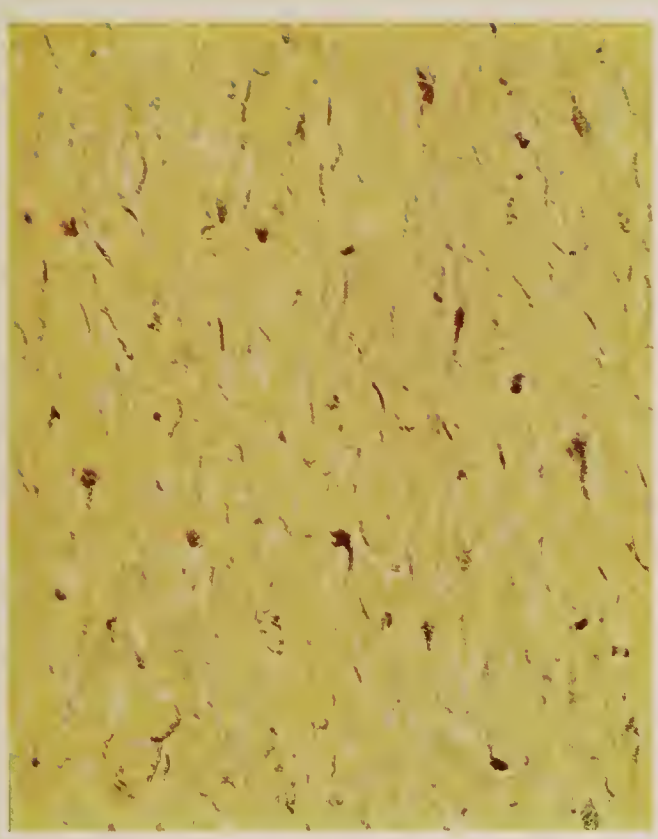
Armstrong Imperial Linoleum offers the same practical advantages characteristic of the other styles of Armstrong Linoleum. Its smooth, greaseproof surface is highly resistant to almost anything which can be spilled. It is also exceptionally easy to keep sparkling with an occasional sweeping or damp mopping.



1605 standard gauge

Armstrong IMPERIAL LINOLEUM

2 yards wide
Reproductions approx. 1/2 actual size



standard gauge 1606



standard gauge 1607



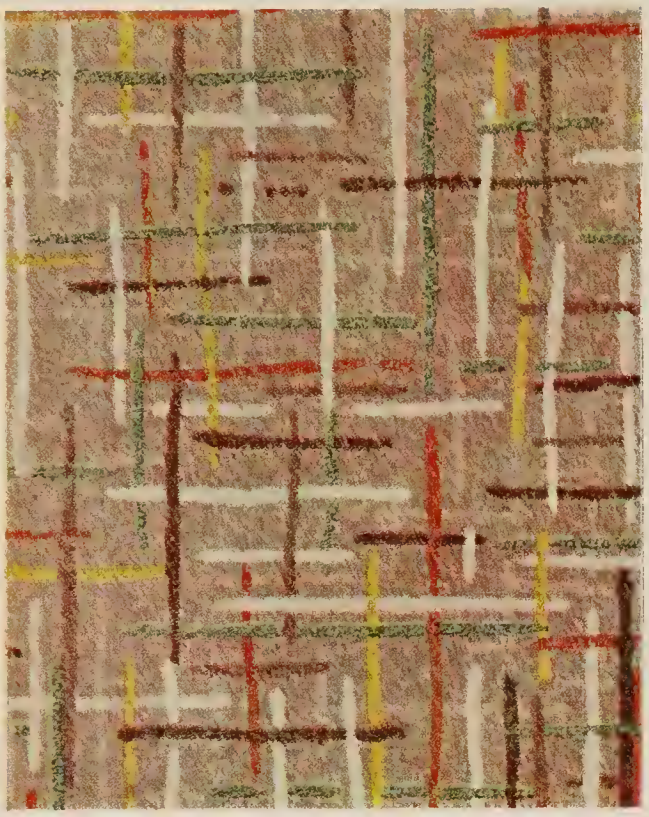
standard gauge 1608

Custom-designed floors add to the beauty and eye appeal of fine modern interiors. Imperial Linoleum, the newest styling in the line of Armstrong Linoleum, offers many opportunities for unique design effects. It forms a perfect background for insets of Plain Linoleum. The burl styling of Armstrong Imperial Linoleum helps make the custom inset stand out beautifully in the floor area.

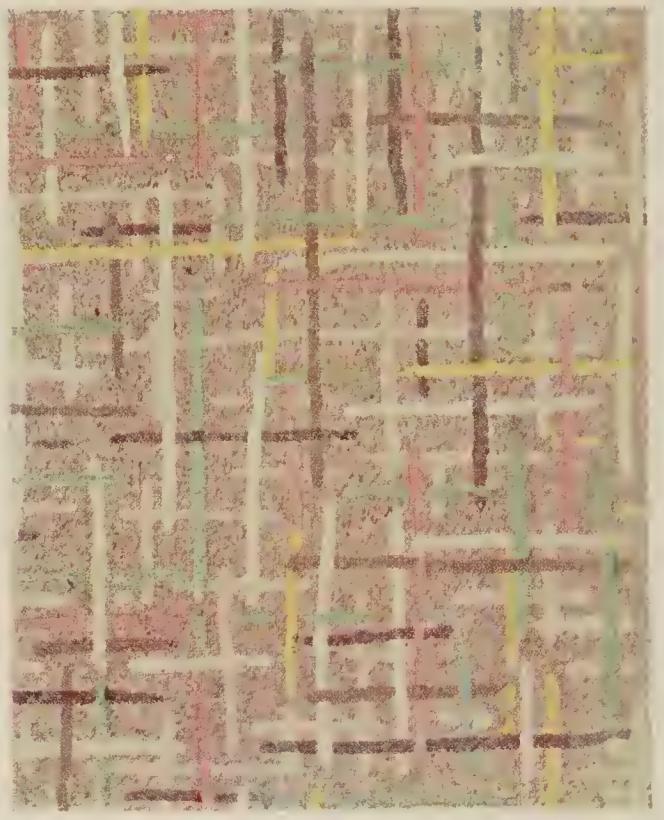
Armstrong Imperial Linoleum can be used to create striking allover floors—or two or more colors can be combined in one area. This is possible because each color in the Imperial line is especially designed to harmonize with the other Imperial Linoleum colorings.

Armstrong IMPERIAL LINOLEUM

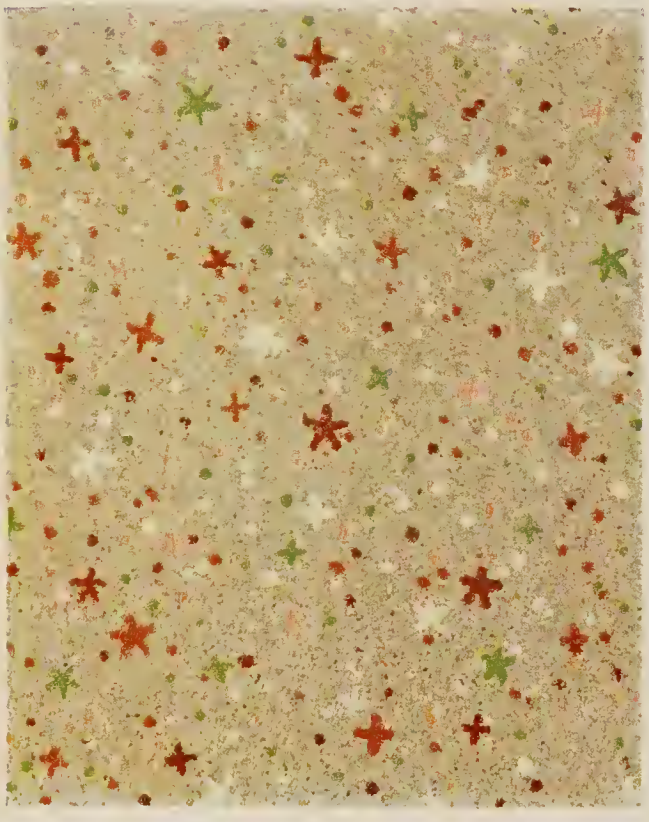
2 yards wide
Reproductions approx. 1/2 actual size



5110 standard gauge



5113 standard gauge



5150 standard gauge

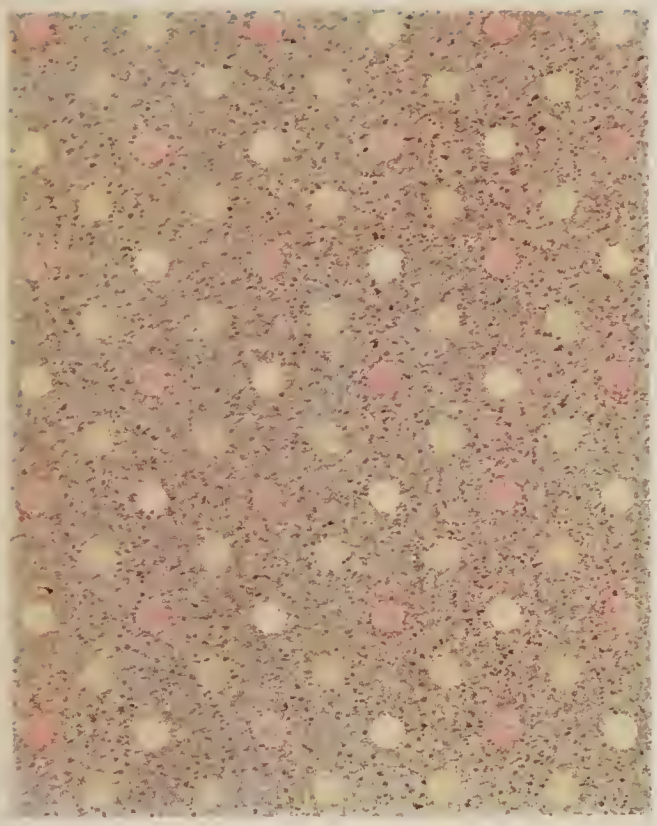


5151 standard gauge

Armstrong CRAFTLINE INLAID LINOLEUM

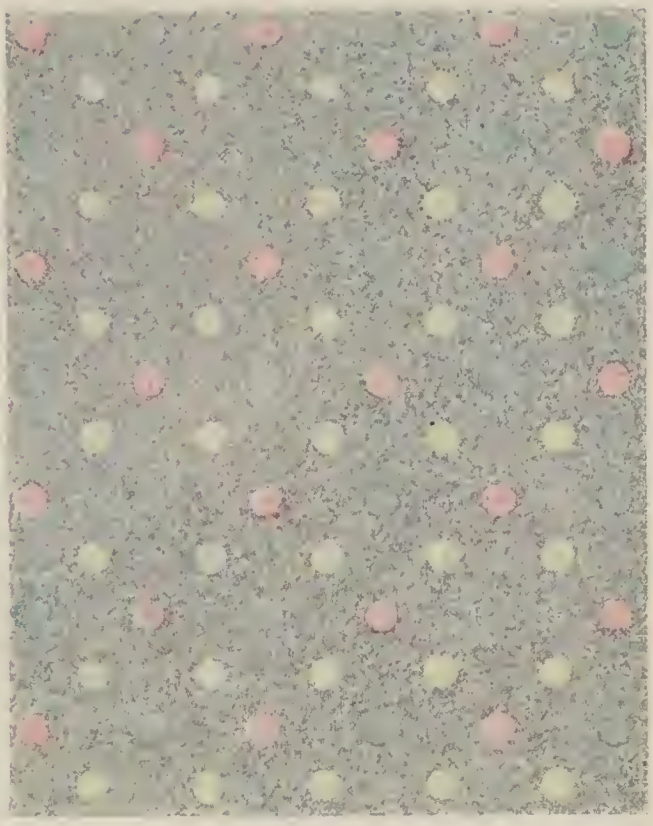
2 yards wide

Reproductions approx. 1/4 actual size



standard gauge

5160



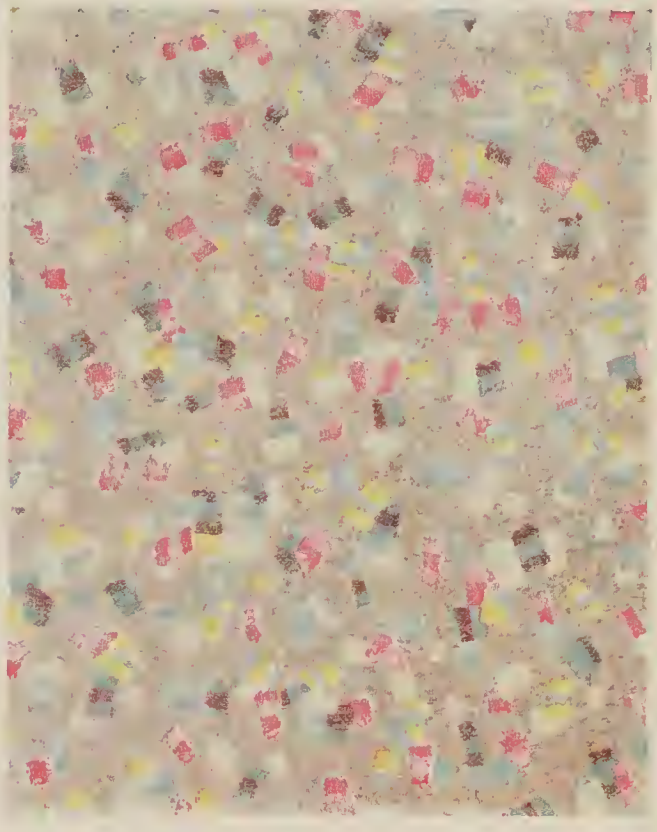
standard gauge

5161



standard gauge

5170



standard gauge

5171

Armstrong CRAFTLINE INLAID LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



1800 standard gauge



1802 standard gauge

Decoray Linoleum is an ideal choice for those rooms where a maximum amount of bold color is desired. This smart economy flooring is distinguished by brush-stroke striations which make it especially suitable for modern homes where a different floor effect is wanted to complement fine furnishings.

Decoray features a multicolored effect which helps make it versatile enough to be used with almost any color scheme. This colorful graining serves the additional purpose of concealing tracked-in dirt and dust until it can be cleaned up. The striations also help to conceal the few seams present in a floor of Armstrong Decoray Linoleum.

This attractive flooring is made in big 6′ rolls for virtually seamless floors and in 9″ x 9″ tiles for easy installation by the home handyman.

Many interesting floor effects can be created by alternating the graining of several pieces of Decoray Linoleum in one area or by installing Decoray Linoleum Tile with the graining of each tile alternated.



1803 standard gauge

Armstrong DECORAY LINOLEUM

2 yards wide

Reproductions approx. 1/3 actual size



standard gauge

1804

Approximately 1/3 actual size



standard gauge

1813

Approximately 1/3 actual size



Armstrong Decaray Linoleum is also available in 9″ x 9″ tiles shawn an Pages 134-135. Here, Style 1802 is used in an attractive design effect.

Armstrong DECORAY LINOLEUM

2 yards wide



1550

heavy (1/8") gauge



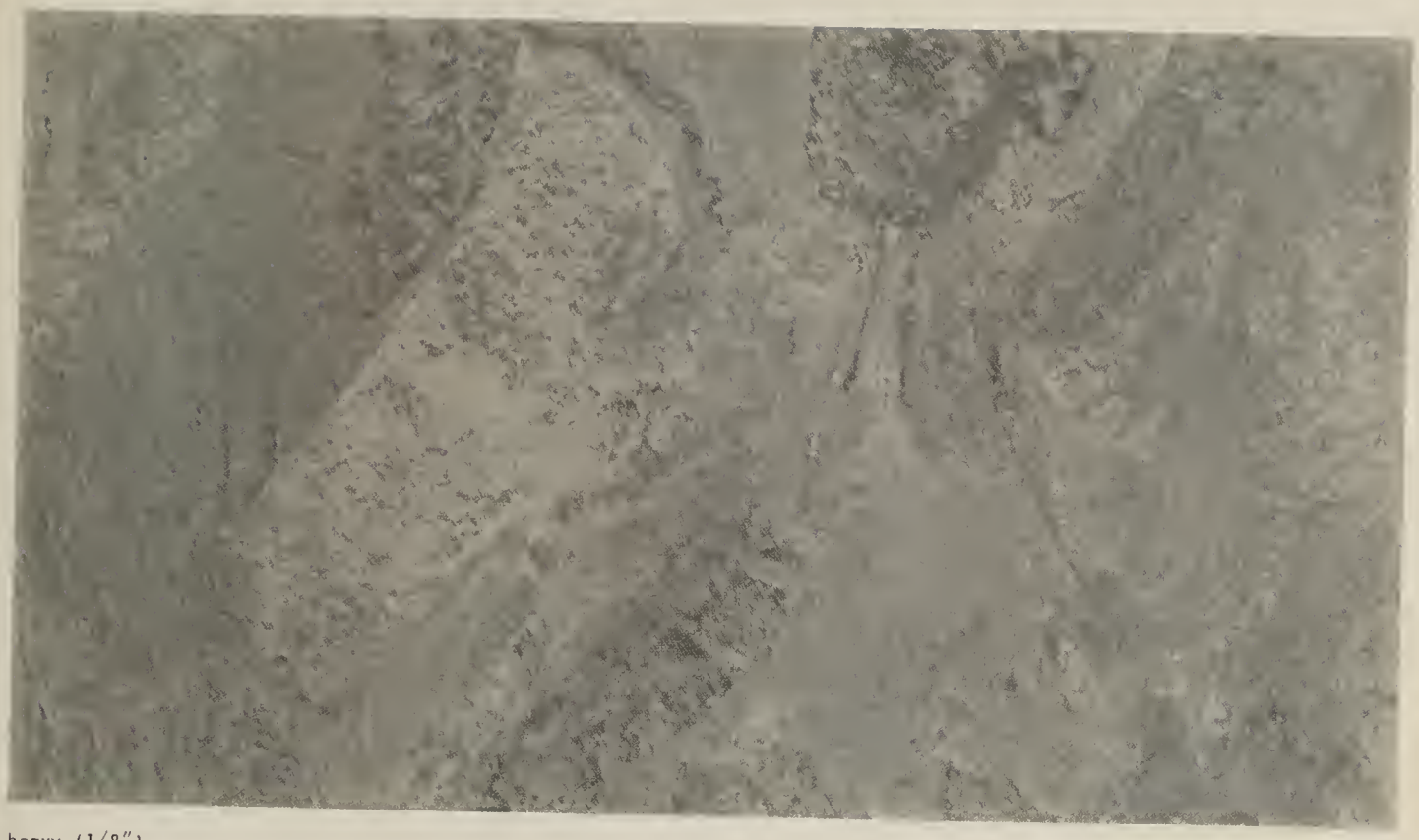
1551

heavy (1/8") gauge

Armstrong TEXTELLE LINOLEUM

2 yards wide

Reproductions approx. 1/3 actual size



heavy (1/8") gauge

1552



heavy (1/8") gauge

1553

Armstrong TEXTELLE LINOLEUM

2 yards wide

Reproductions approx. 1/3 actual size



1554

heavy (1/8") gauge



1555

heavy (1/8") gauge

Armstrong TEXTELLE LINOLEUM

2 yards wide

Reproductions approx. 1/3 actual size

heavy (1/8") gauge

1556

Approximately 1/3 actual size



Textelle Linoleum makes a beautiful base for area rugs. In addition, this handsome floor provides an ever-all floor effect during summer months.

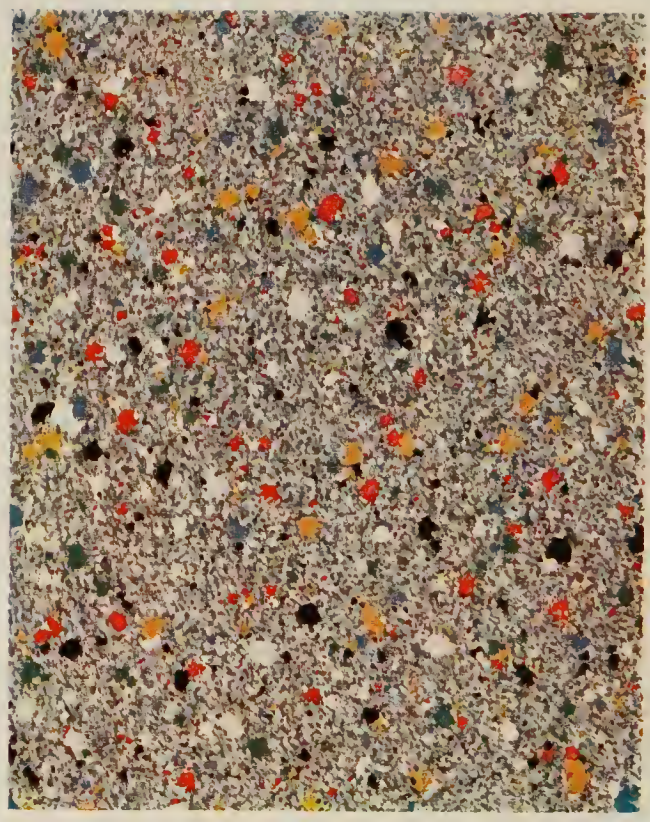
Armstrong TEXTELLE LINOLEUM

2 yards wide



5000 Fiesta White standard gauge 95000

Armofelt Back *Cushion-Eze Back*



5004 Granada Gray standard gauge 95004

Armofelt Back *Cushion-Eze Back*

Armstrong Spatter Linoleum is one of today's most popular floor stylings. The colorful, carefree early American spatterdash design gives any interior a smart and informal atmosphere. In addition to its gay appearance, the random multicolored dot effect and richly colored backgrounds offer fresh approaches to interior decorating.

As a practical feature, the irregular arrangement of the dots over the textured background makes dust and dirt almost invisible. Spatter Linoleum is also long wearing because the inlaid colors—dots included—go right through to the backing and last for the life of the floor.

Those colorings having the figure 9 before the pattern number are available both with Armofelt Back and with the revolutionary Cushion-Eze Back. This exclusive backing consists of a foam layer which actually supports the linoleum floor on millions of air bubbles so you're actually walking on air. This means there's less fatigue after a day of housework. The indentation resistance of Cushion-Eze-backed linoleum is the same as for Armstrong Linoleum with Armofelt Back—75 pounds per square inch.

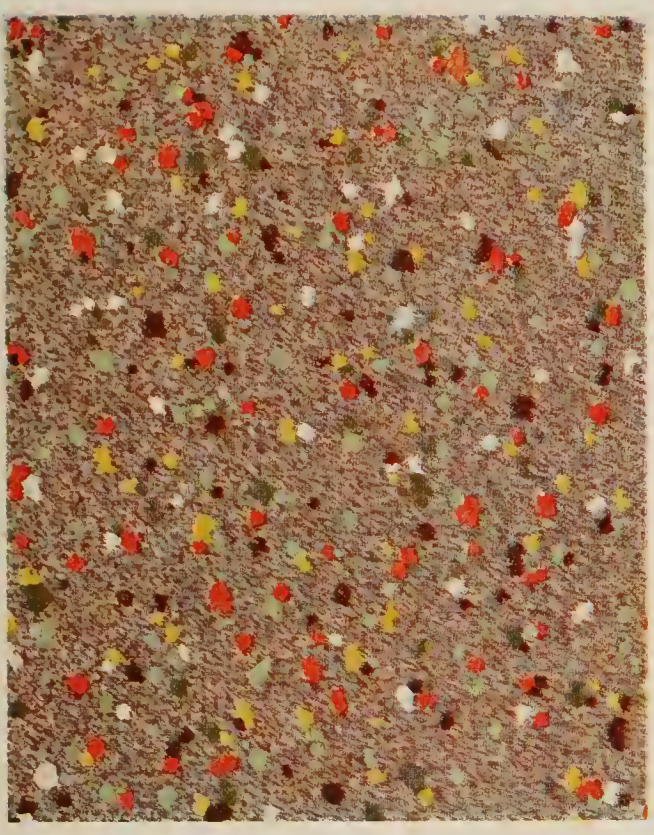


5007 Tuscany Tan standard gauge

Armstrong SPATTER LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size

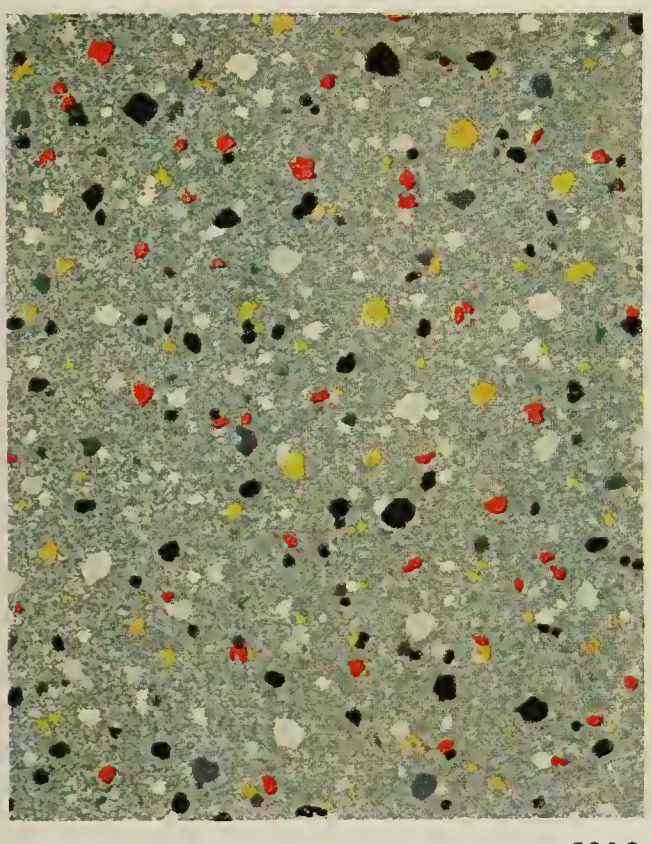


95014 standard gauge Toledo Taupe 5014

Cushion-Eze Back *Armofelt Back*

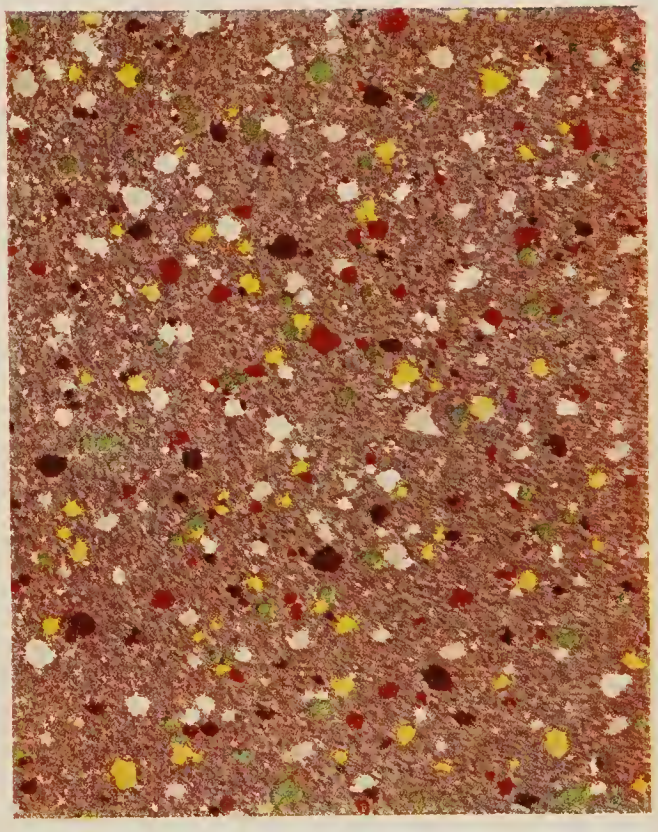


standard gauge Amarillo Gray 5018



95019 standard gauge Malaga Green 5019

Cushion-Eze Back *Armofelt Back*

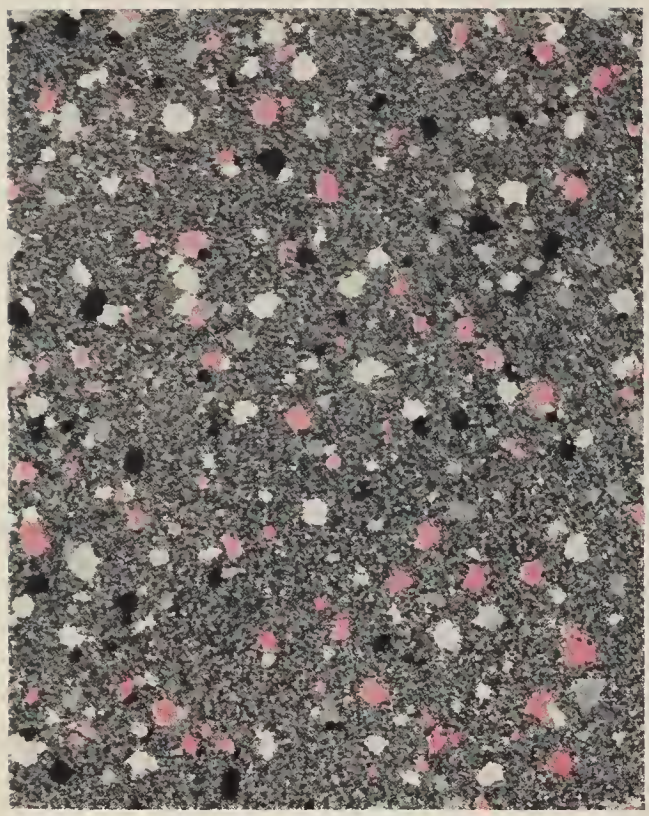


standard gauge Culebra Copper 5022

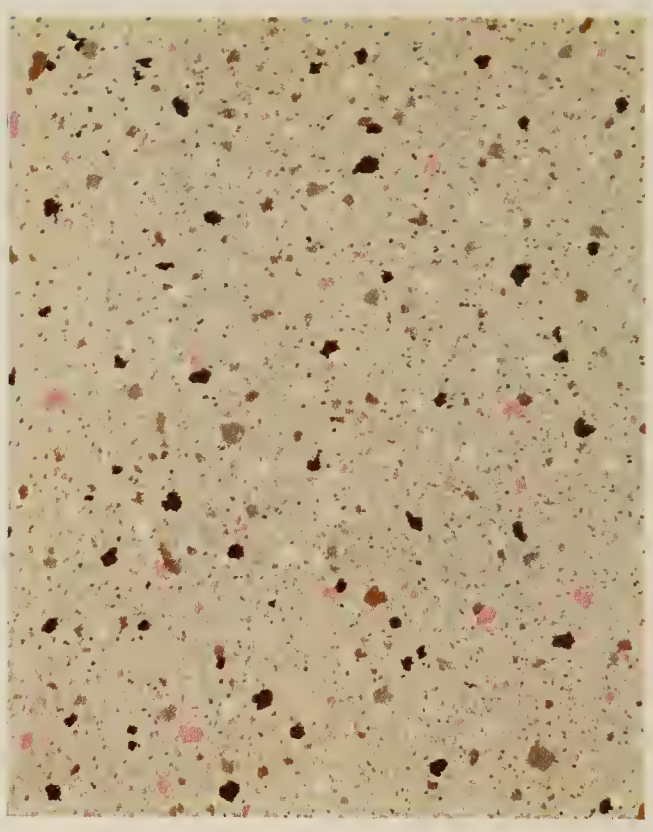
Armstrong SPATTER LINOLEUM

2 yards wide

Reproductions approx. 1/4 actual size



5024 Carboneras Pink standard gauge



5025 Sevilla Sand standard gauge 95025

Armofelt Back *Cushion-Eze Back*



5026 Madrigal Taupe standard gauge 95026

Armofelt Back *Cushion-Eze Back*



5028 Coruna Gray standard gauge 95028

Armofelt Back *Cushion-Eze Back*

Armstrong SPATTER LINOLEUM

2 yards wide

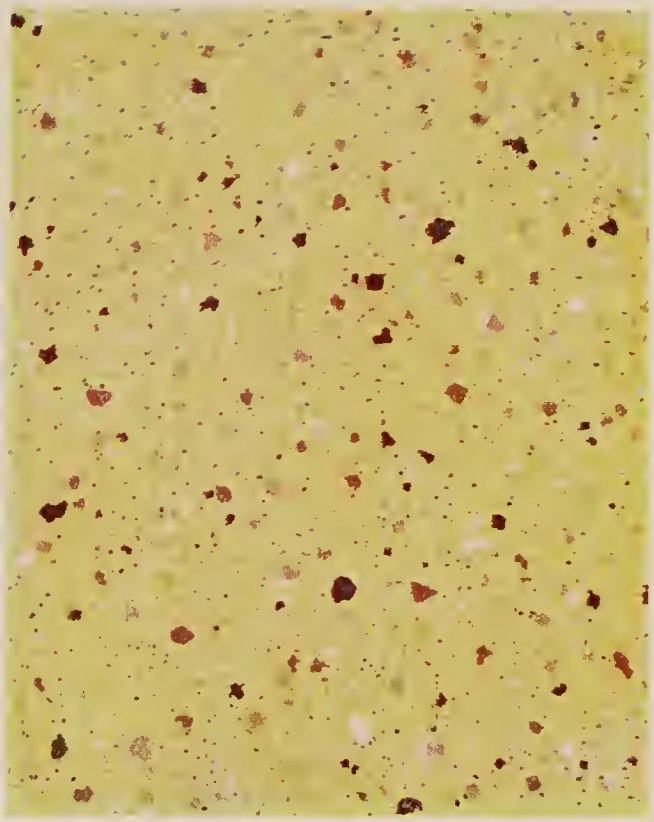
Reproductions approx. 1/4 actual size



standard gauge

Castilla Ivory 5029

Approximately 1/4 actual size



standard gauge

Arroyo Yellow 5030

Approximately 1/4 actual size



Practical as well as beautiful, Spatter Linoleum's gay design conceals dust and dirt. In addition, it forms a background for any color scheme.

Armstrong SPATTER LINOLEUM

2 yards wide



1500 standard gauge



1501 standard gauge



1503 standard gauge



1508 standard gauge

Armstrong ROYELLE LINOLEUM

2 yards wide and 9″ x 9″ tile
Reproductions approx. 1/3 actual size



standard gauge

1509



standard gauge

1516



standard gauge

1521



standard gauge

1523

Armstrong ROYELLE LINOLEUM

2 yards wide and 9″ x 9″ tile
Reproductions approx. 1/3 actual size



GRANETTE CORLON Offers a soft textured graining so popular in today's fine interiors.....*Pages* *98–99*

TERRAZZO CORLON Has the beauty of classic terrazzo with its multicolored stone chip effect. Some patterns have new Hydrocord Back for use on grade or below grade.....*Pages* *100–103*

PLASTICS

DECORESQ CORLON Exclusive Armstrong design effects featuring a variety of textured styles in sheet plastic flooring. Patterns with Hydrocord Back for on grade or below grade*Pages* *104–106*

MOSAIC CORLON Resembles the artistic effects of handcrafted mosaic tile floors. Made with standard Armofelt Back and with exclusive Cushion-Eze foam back*Pages* *107–109*

Japan Air Lines
Rockefeller Center Ticket Office, N. Y. C.
Floor: Armstrong Vinyl Corlon, Granette Styling
Architect: Junzo Yoshimura, Tokyo
associated with Raymond and Rado, N. Y. C.



6180



6181



6182



6183

Armstrong GRANETTE CORLON

2 yards wide and 1" feature strips
Reproductions approx. 1/2 actual size



6184



6185



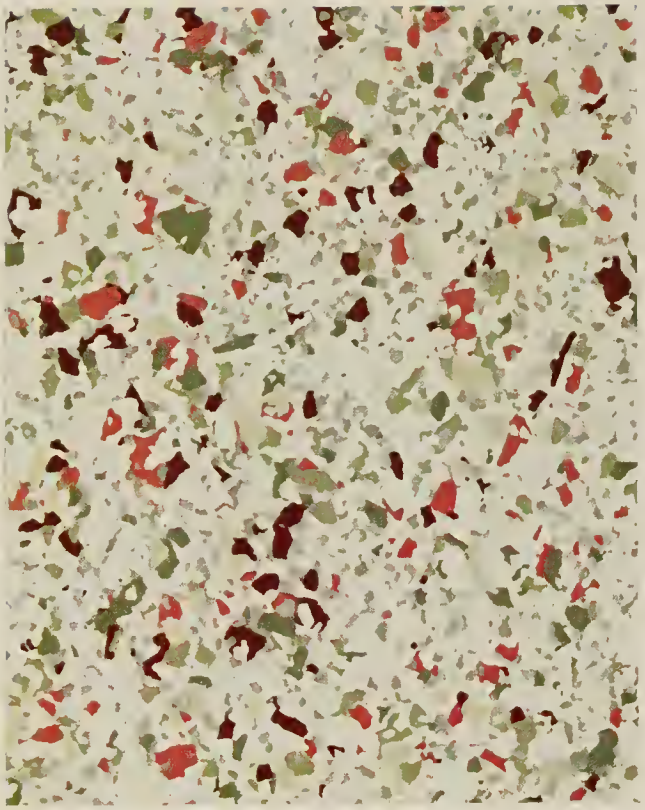
6186



6187

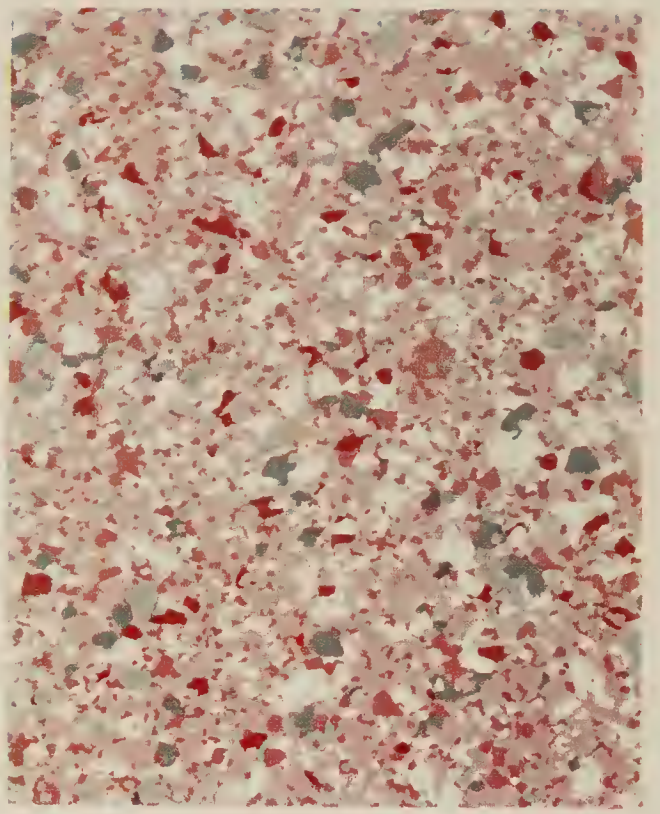
Armstrong GRANETTE CORLON

2 yards wide and 1" feature strips
Reproductions approx. 1/2 actual size



6200* — *Armofelt Back*

86200 — *Hydrocord Back*



6201 — *Armofelt Back*

86201 — *Hydrocord Back*

Now the beauty of Terrazzo Corlon is available for any room of the home or light commercial area. This handsome plastic flooring is made in 6′ rolls for on-grade, below-grade, and suspended floors. In addition, Armstrong Terrazzo Corlon is available in 9″ x 9″ tiles for easy installation by the home handyman. (See Page 131.)

This striking floor offers a design having the appearance of rich classic terrazzo. Small chips of bright, clear colors scattered over richly colored backgrounds make Armstrong Terrazzo Corlon a lovely setting for any decorating motif. These rich colors are inlaid right into the material and are a part of the tough vinyl wearing surface of this modern floor.

Those stylings designated with a figure 8 before the pattern number are made with the exclusive Armstrong Hydrocord Back. This unique backing is not affected by the alkaline moisture present in concrete subfloors in direct contact with the ground. This means that it is now possible to enjoy the beauty and practical advantages of a luxurious sheet plastic floor in basements and basementless buildings.



6202* — *Armofelt Back*

86202 — *Hydrocord Back*

2 yards wide
* also in 9″ x 9″ tile



86203
Hydrocord Back

6203*
Armofelt Back



6204



86205
Hydrocord Back

6205*
Armofelt Back



6207

Armstrong TERRAZZO CORLON

2 yards wide
* also in 9" x 9" service gauge tile
Reproductions approx. 1/2 actual size



6208*
Armofelt Back

86208
Hydrocord Back



6212



6213*
Armofelt Back

86213
Hydrocord Back



6214*
Armofelt Back

86214
Hydrocord Back

Armstrong TERRAZZO CORLON

2 yards wide
* also in 9" x 9" service gauge tile
Reproductions approx. 1/2 actual size



86215
Hydrocord Back

6215*
Armofelt Back



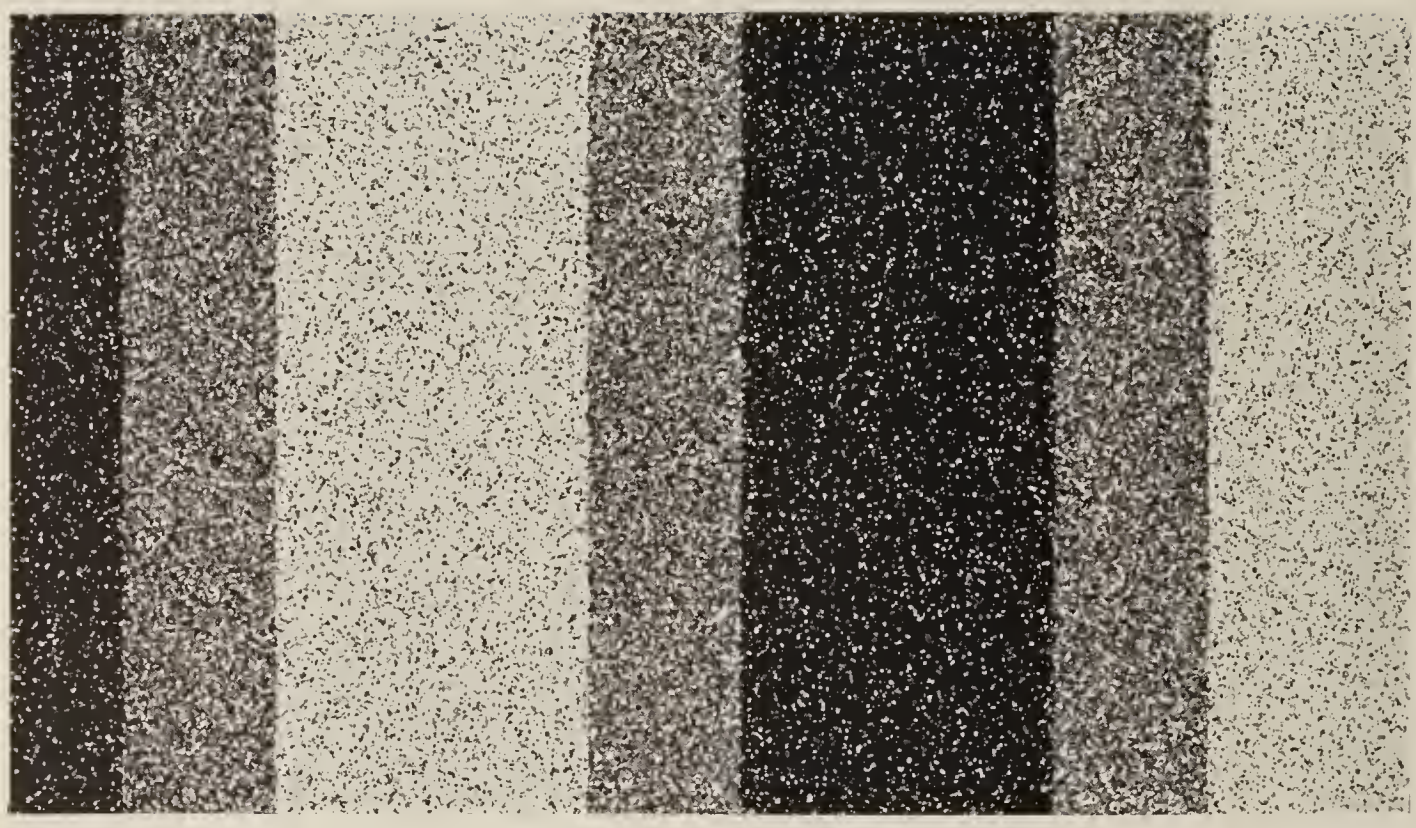
6216*



Terrazzo Corlon's resistance to grease and spilled foods and beverages makes it ideal for a dining room. Terrazzo styling 6208 was used here.

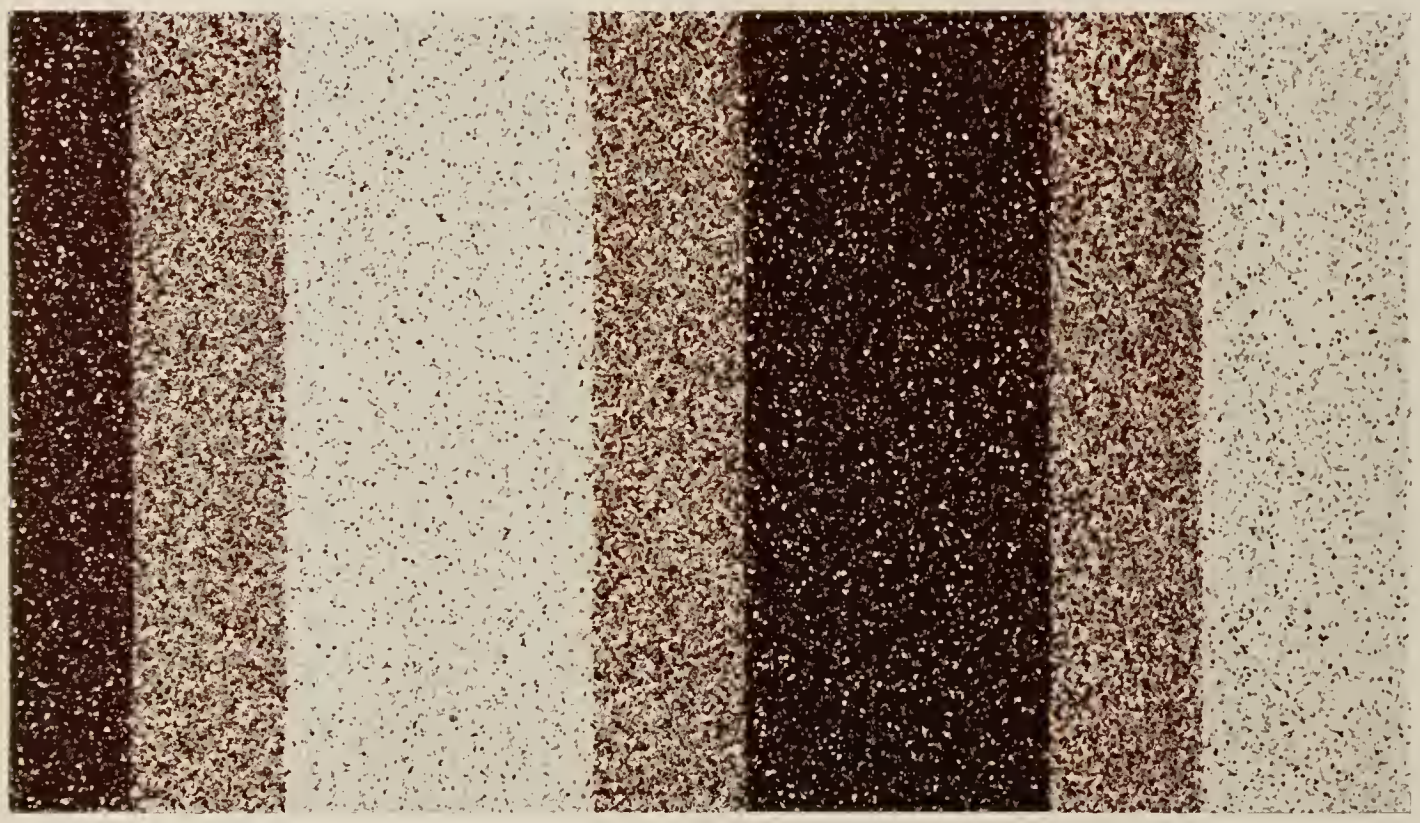
Armstrong TERRAZZO CORLON

2 yards wide
* also in 9" x 9" service gauge tile
Reproductions approx. 1/2 actual size



6300
Armofelt Back

86300
Hydrocord Back



6301
Armofelt Back

86301
Hydrocord Back

Armstrong DECORESQ CORLON

2 yards wide
Reproductions opprox. 1/4 actual size



6320



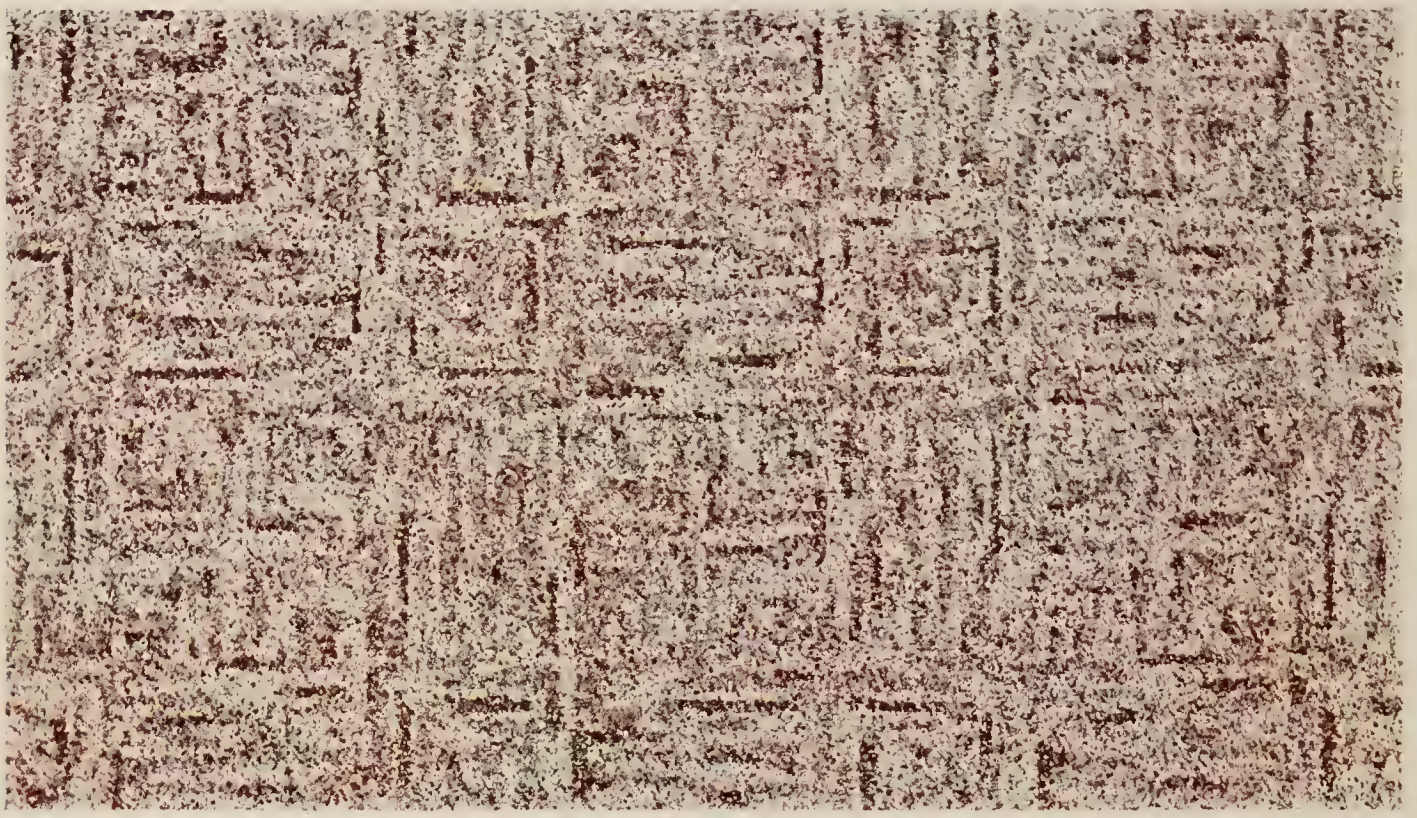
6321

Armstrong DECORESQ CORLON

2 yards wide
Reproductions approx. 1/4 actual size



6340



6341

Armstrong DECORESQ CORLON

2 yards wide

Reproductions approx. 1/4 actual size



96502
Cushion-Eze Back

6502
Armofelt Back



96503
Cushion-Eze Back

6503
Armofelt Back



96504
Cushion-Eze Back

6504
Armofelt Back



96505
Cushion-Eze Back

6505
Armofelt Back

Armstrong MOSAIC CORLON

2 yards wide
Reproductions approx. 1/2 actual size



6506
Armofelt Back

96506
Cushion-Eze Back



6507
Armofelt Back

96507
Cushion-Eze Back



6508
Armofelt Back

96508
Cushion-Eze Back



6509
Armofelt Back

96509
Cushion-Eze Back

Armstrong MOSAIC CORLON

2 yards wide
Reproductions approx. 1/2 actual size

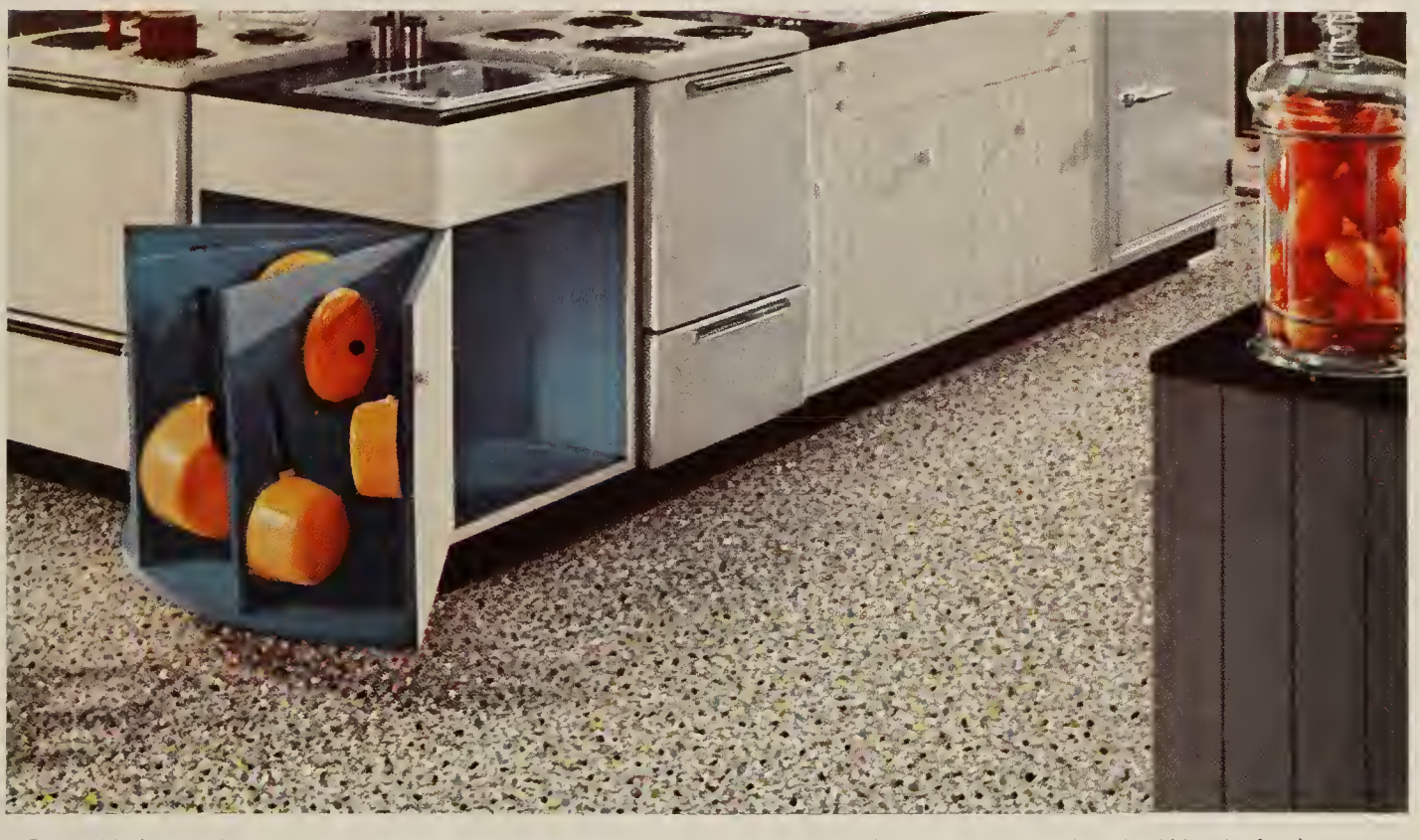


96510
Cushion-Eze Back

6510
Armofelt Back



6511
Armofelt Back



The multicolored chips in Mosaic Corlon hide tracked-in dirt and dust until they can be removed. The design also hides the floor's seams.

Armstrong MOSAIC CORLON

2 yards wide
Reproductions approx. 1/2 actual size



ASPHALT TILE Colorful, low in cost. Can be used in any room, even the basement*Pages* *112–117*

EXCELON TILE A vinyl-asbestos flooring for use over all types of subfloors. Rich colors, economical in cost*Pages* *118–121*

RUBBER TILE An unusually rich sheen distinguishes this fine resilient floor. Can be used over any subfloor—suspended, on- or below-grade level*Pages* *122–123*

LINOTILE Made exclusively by Armstrong. Unmatched for exceptional durability and ease of maintenance*Pages* *124–126*

RESILIENT TILES

CORK TILE Captures the authentic beauty of natural cork in a luxury floor*Page* *127*

CUSTOM CORLON TILE Homogeneous vinyl, the ultimate in luxury flooring*Pages* *128–130*

TERRAZZO CORLON TILE Service Gauge Terrazzo Corlon in 9″ x 9″ tiles*Page* *131*

PARQUET LINOLEUM TILE A new flooring which offers exciting possibilities for custom floor designs*Pages* *132–133*

DECORAY LINOLEUM TILE Decoray Linoleum in low-cost 9″ x 9″ tiles*Pages* *134–135*

ROYELLE LINOLEUM TILE Popular 9″ x 9″ tile form of Royelle Linoleum*Page* *136*

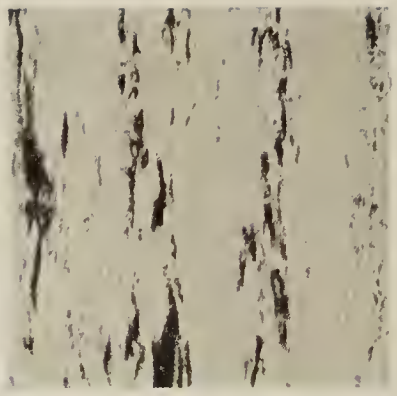
Socony Mobil Oil Company, New York City
Employees' Cafeteria
Floor: Armstrong Excelon Tile
Architect: J. Gordon Corr and Associates



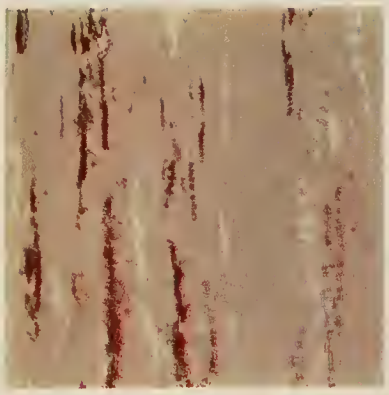
A-200 Pampeian Red*



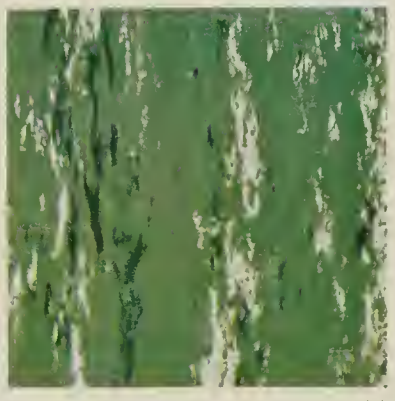
A-210 Black*



D-900 Ivory



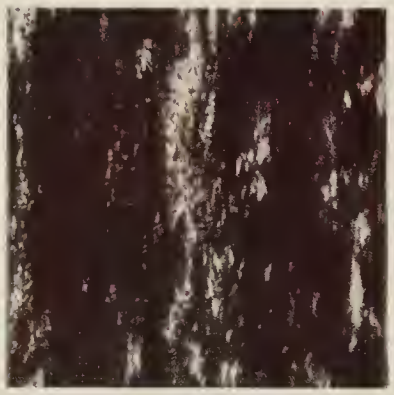
C-901 Pearl Blush



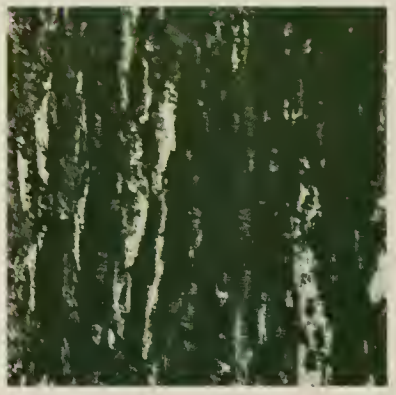
C-902 Faam Green G2-902**



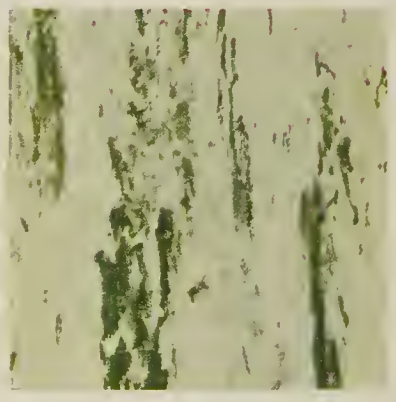
C-903 Fawn



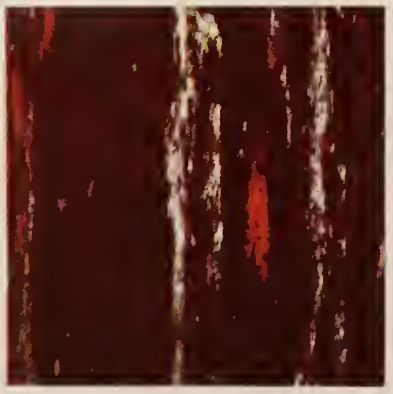
B-905 Ebany



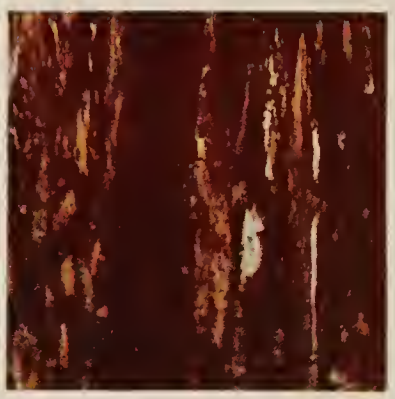
C-907 Jasper Green



D-911 Seaspray Green



B-918 Cedar G2-918**



B-919 Tokay



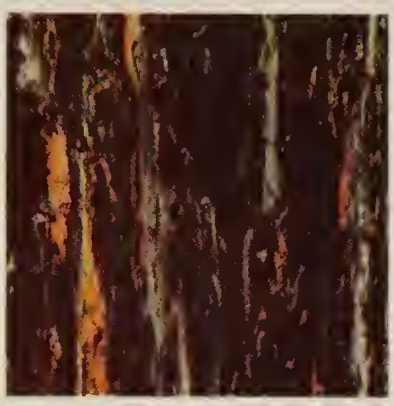
C-920 Canyon Beige

Armstrong ASPHALT TILE

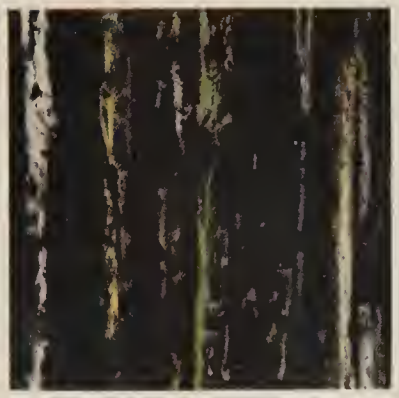
1/8" and 3/16" gauges
9" x 9"
* 18" x 24" only
** greaseproof



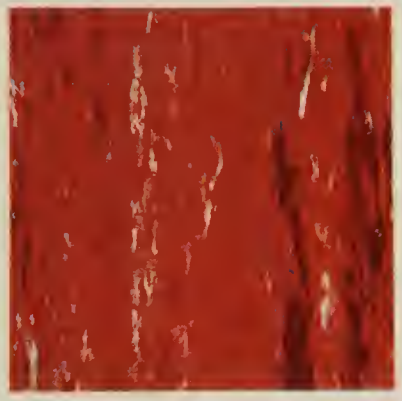
Honey Beige C-921



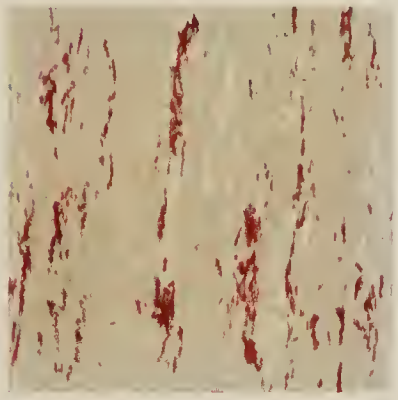
Autumn Brown B-922



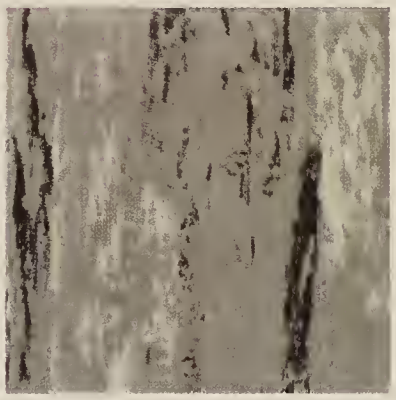
Everglade Block B-923



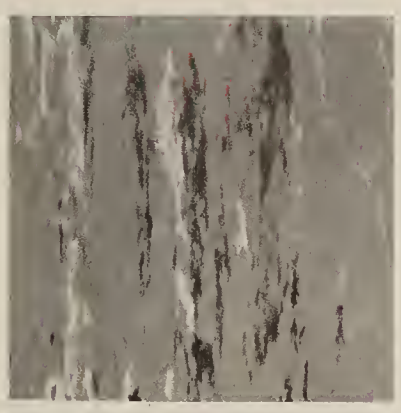
G2-924* Cinnabar C-924



G2-926* Palomino Beige C-926



G2-944* Pewter Gray C-944



Pearl Gray C-946



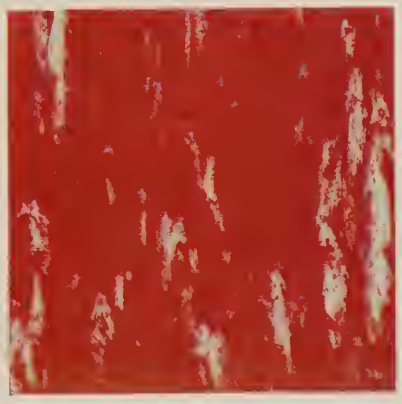
Gray Taupe C-947



Silver Blue D-953



Cameo Gray C-961



Carinthian Red D-964**



Light Woodtone D-970**

Armstrong ASPHALT TILE

1/8" and 3/16" gauges
9" x 9"
* greaseproof
** 1/8 gauge only



C-971 Dark Woodtone



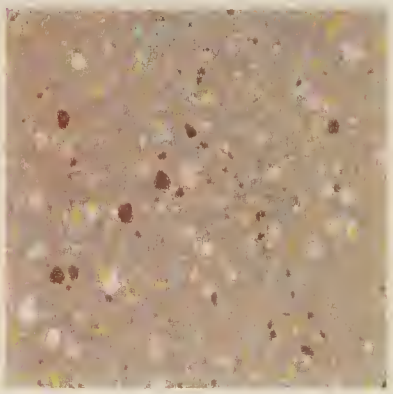
974 Bland Carkstyle



975 Light Carkstyle



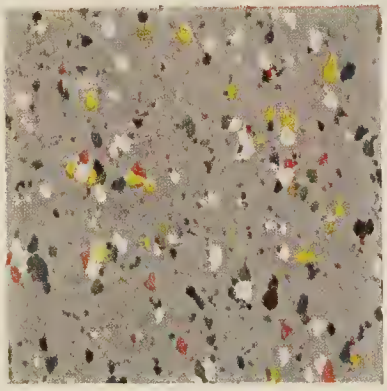
976 Dark Corkstyle



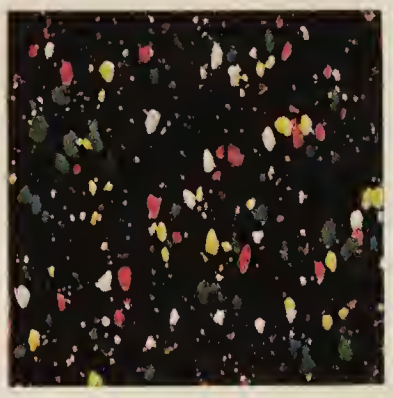
C-989 Tapestry Beige



D-990 Gardenia



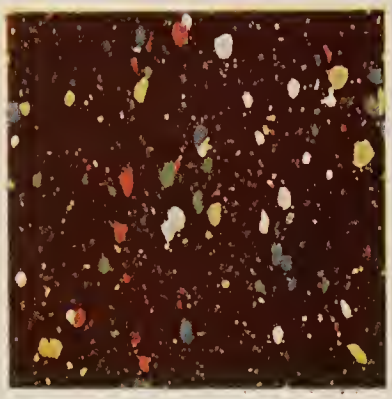
C-991 Gray Dawn



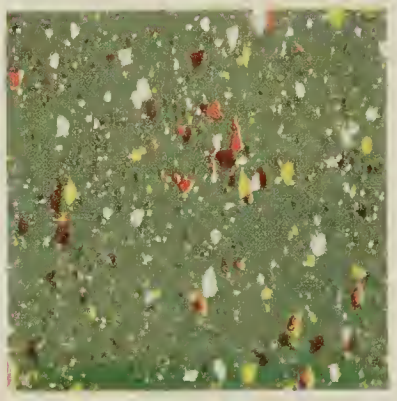
B-992 Onyx Black



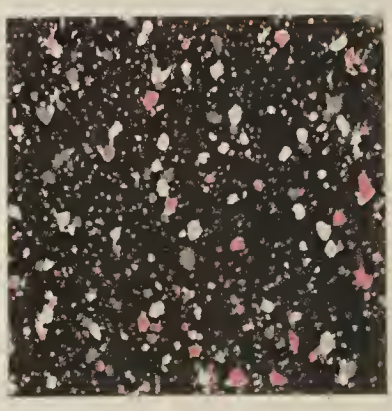
C-993 Sandrift



B-994 Cordovan



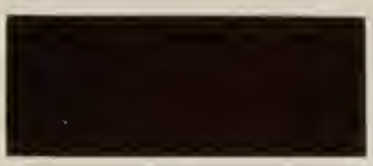
C-995 Cactus Green



C-997 Charcaal

Armstrong ASPHALT TILE

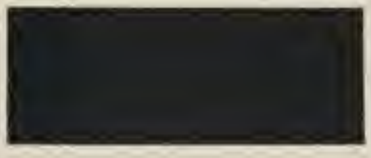
1/8" gauge
9" x 9"



Pampeian Red A-200



Venetian Red C-204



Black A-210



Regal Blue D-231



Azure Blue D-235



Yellow D-246



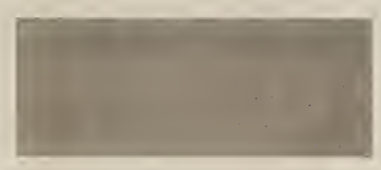
Dark Green C-251



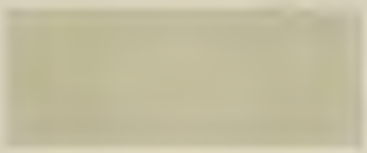
Light Green C-257



Light Gray C-265



Steel Gray C-266



White D-270



Garnet D-275

Armstrong Asphalt Tile Inset Colors. The insets on Page 117 may be ordered in any combination of the colors above. Insets on Page 116 are available in these colors at a slight additional cost. D-231, D-235, C-251, C-265, and C-266 are made only for inset work. Nos. C-204, D-246, C-257, D-270, and D-275 are available only as feature strips and insets. All Inset Colors are made in 1/8″ and 3/16″ gauges.



Havana CB-206



Black CB-210



Armstrong Top-Set Asphalt Cove Base (above) is made in 4″ and 6″ heights in sections 48″ and 36″ long.

Armstrong Shuffleboard Inset No. 560 (right) is die-cut at the factory. It is available in the colors shown.



Standard Shuffleboard Unit 560

Armstrong ASPHALT TILE ACCESSORIES



500 Wild Duck



501 Cocktail



502 Compass



506 Sunburst



508 Target



510 Anchor



511 Pointer



514 Champagne



515 Top Hat



516 Sailboat



517 Sailfish



520 Four Aces



521 Siesta



522 Lyric



523 Sandtrap



524 Palm Tree

Armstrong Asphalt Die-Cut Insets lend an air of individuality to residential and commercial floors for a small additional cost. They are made in the colors shown in 18″ x 18″ size and 1/8″ and 3/16″ gauges. These insets can also be ordered in the special colors shown on Page 115.

They are also made in alphabet characters, numerals, punctuation marks, and traffic directors. These are available in any two colors of asphalt tile or asphalt tile inset colors. All backgrounds are 9″ high—inset widths in proportion to character widths.

Basketball Court Units are also available in Armstrong Asphalt Die-Cut Insets. Each court unit consists of all official straight lines and restraining circles in plain white, yellow, or black colors made in sizes for college, high school, and junior high schools.

Armstrong ASPHALT TILE DIE-CUT INSETS

1/8″ and 3/16″ gauges
18″ x 18″



Florist Delivery 580

27", 36", and 63" square
2 colors



Cacktail 581

27", 36", and 63" square
4 calars



Dental Caduceus 582

18", 27", 36", and 63" square
5 colors



Script Initials 583

18", 27", and 36" square
2 colors



Medical Caduceus 585

18", 27", 36", and 63" square
3 colors



Men's Shap Design 586

18", 27", 36", and 63" square
5 calars



American Legion 587

27", 36", and 63" square
3 colors



Elks Ladge Emblem 588

27", 36", and 63" square
4 official calars



Standard Managrams 589

18", 27", and 36" square
2 calars



Mortar and Pestle 590

18", 27", 36", and 63" square
3 colors



16-Paint Campass 591

18", 27", 36", and 63" square
4 colors



Anchar 593

18", 27", 36", and 63" square
3 calars



Treble Clef 594

18", 27", 36", and 63" square
3 calars

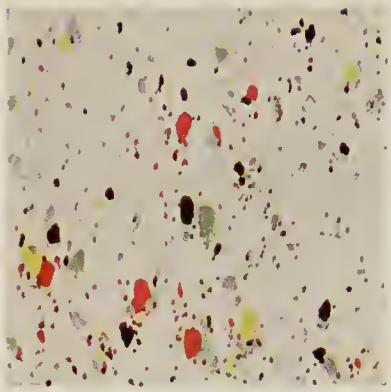


Manhattan 599

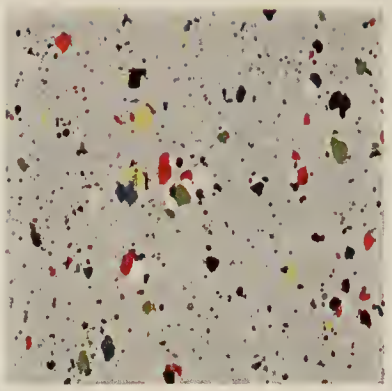
18", 27", and 36" square
3 colors

Armstrong Standard Hand-Cut Insets are available in many popular trade-marks, monograms, and insignia. They may be ordered in any of the solid inset colors shown on Page 115 at no extra cost. In addition to the insets shown here, modern, block or script alphabet characters are also made in Asphalt Tile Standard Hand-Cut Insets. These are available in 9" x 9", 12" x 12", and 18" x 18" in 1/8" and 3/16" gauges. Limit is one character to each block.

Armstrong ASPHALT TILE STANDARD HAND-CUT INSETS



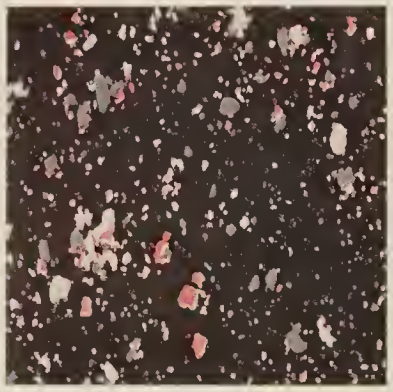
735 Andover White



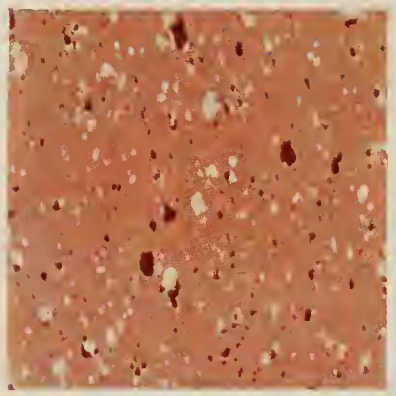
736 Bedford Groy



737 Cope Cod Beige



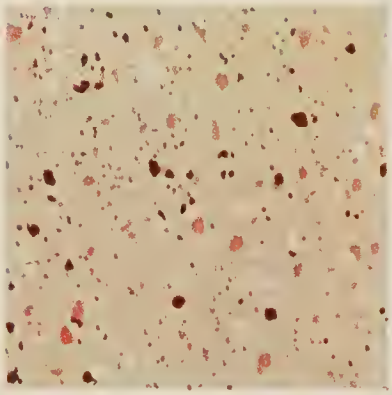
739 Providence Chorcoal



740 Arlington Cedar



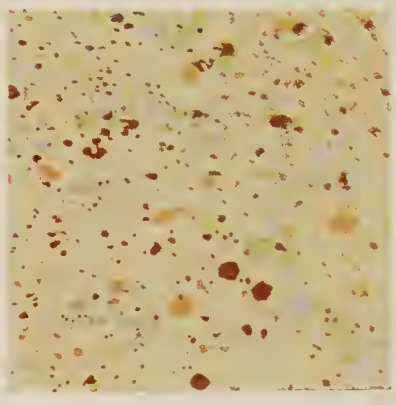
744 Bongor Copper



746 Rutlond Beige

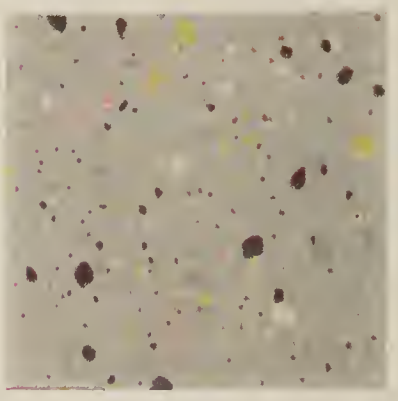


747 Meriden Taupe



748 Lynn Ivory

Armstrong Excelon Tile is made of pure vinyl resins fortified with asbestos fibers. Priced considerably below many other plastic tiles, it nevertheless offers beauty and durability previously found only in more expensive floorings. In addition to its original low cost, Armstrong Excelon Tile is economical to install—most "home mechanics" can do it themselves. The Service Gauge is extremely flexible and can be cut with a pair of ordinary household scissors. Armstrong Brushing Cement S-700 is spread on the floor with a paintbrush, and the tile laid in the adhesive. Armstrong Excelon Tile can be installed over any type of subfloor—even in the basement, because it resists the harmful alkaline moisture found in these areas. It is made in 5 style lines, including spatters, corkstyles, and woodtones.



749 Worcester Groy

Armstrong EXCELON TILE

service gauge
9″ x 9″



designers series – Mint Green 760



designers series – Silver Gray 761



designers series – Sand Beige 762



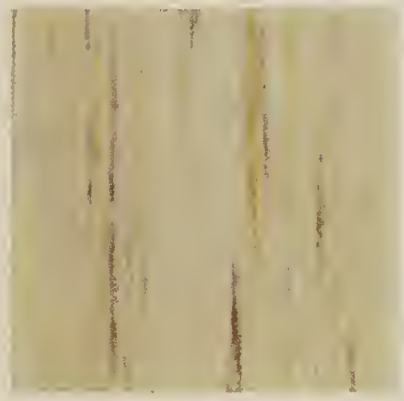
designers series – Rose Taupe 763



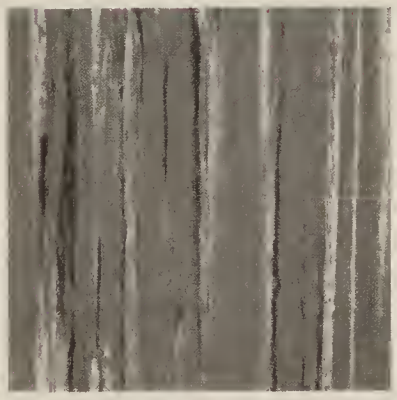
designers series – Sienna Copper 765



designers series – Ivory Tan 766*



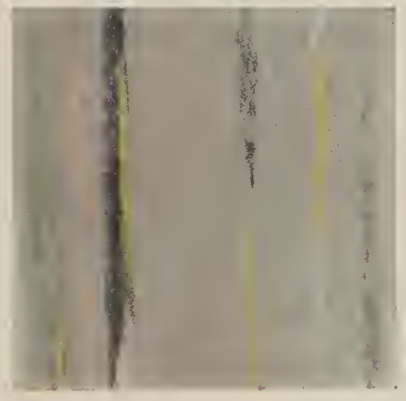
designers series – Ecru 767



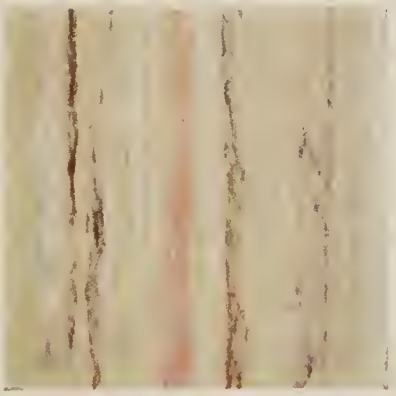
designers series – Mineral Gray 768*



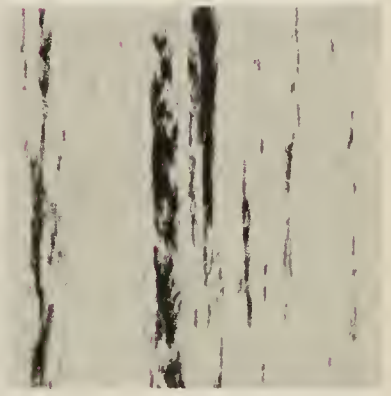
Cheyenne Taupe 700**



Mandan Gray 701**



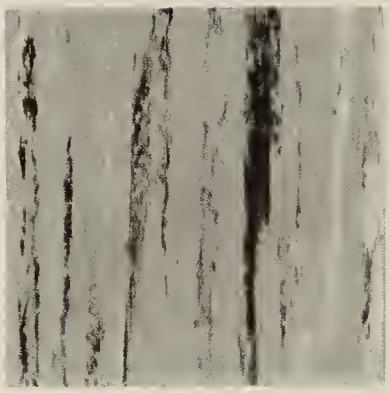
Waca Sond 702



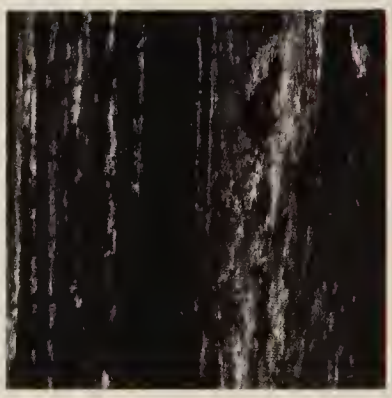
Seneca White 770

Armstrong EXCELON TILE

1/8" and service gauges
9" x 9"
*1/8" gauge anly
**service gauge anly



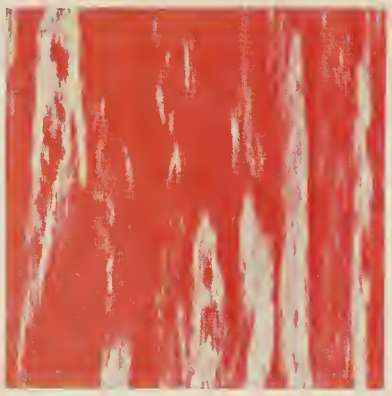
771 Mohowk Gray



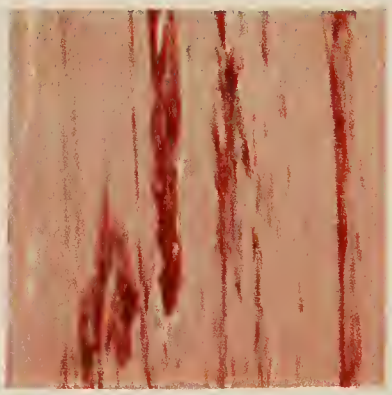
772 Comanche Block



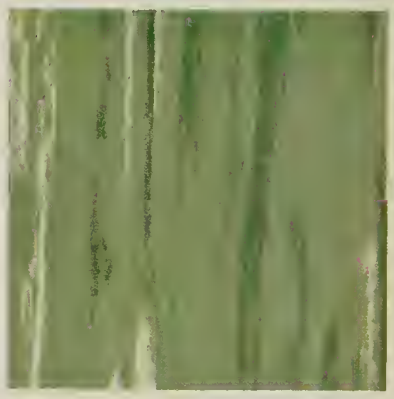
776** Cherokee White



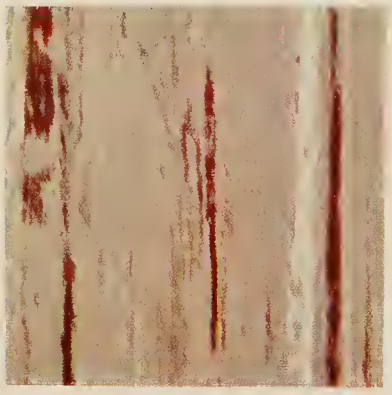
777** Apoche Red



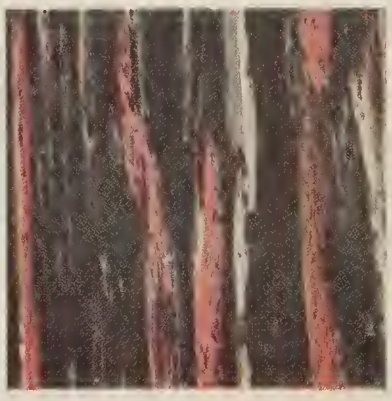
779 Mohican Cedor



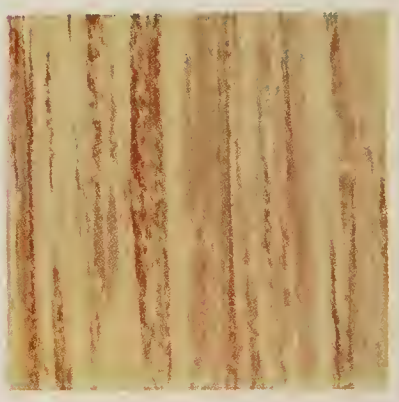
780 Osage Green



783 Iroquois Ton



786** Mohove Chorcool



788 Light Woodtone



789 Dark Woodtone

The straight-grained patterns in Armstrong Excelon Tile offer today's homemaker the opportunity of having custom floor effects. For example, the graining can be alternated as each tile is installed. Or, the tiles can be laid on the diagonal with the graining running in the same direction. More striking floor designs can be achieved by using two or more colorings in straight-grained series together in one area. This is possible because each coloring has been designed to complement other colorings in the same series.

Armstrong EXCELON TILE

1/8" ond service gauges
9" x 9"
**service gauge only



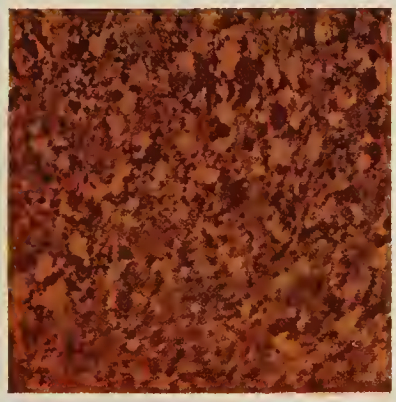
Redwoodtone 796†



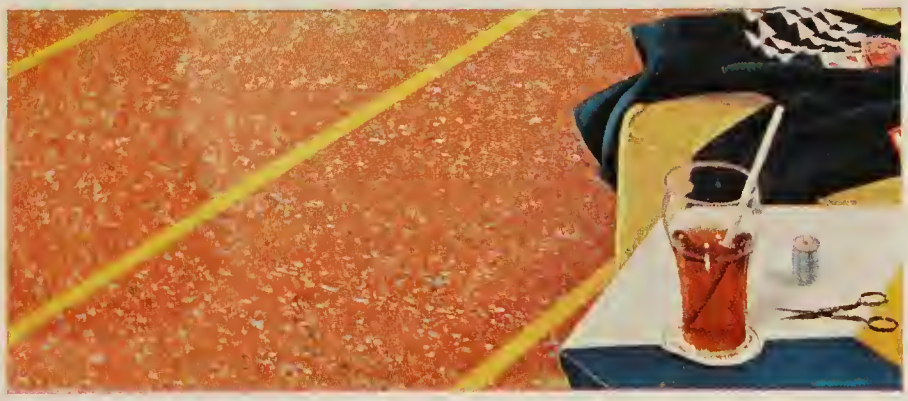
Medium Corkstyle 797



Light Corkstyle 798



Dark Corkstyle 799



Excelon Beveled Edging S-19 is used in finishing edges of Excelon floors at doorways and on aisles. Plain Black, Service Gauge only. 1″ wide.



Excelon Feature Strips give an expensive custom look to floors of Excelon Tile, yet are low in cost. They are made in 24″ lengths and are 1″ wide. 1/8″ and Service Gauges are available.



Plain Black 790

Plain White 791



Plain Red 792



Plain Yellow 793



Plain Green 794



Plain Brown 795

Armstrong EXCELON TILE

service gauge
9″ x 9″
†also in 1/8″ gauge



609 Ecrulette



610 Beige Taupe



611 Caralette



613 Black White



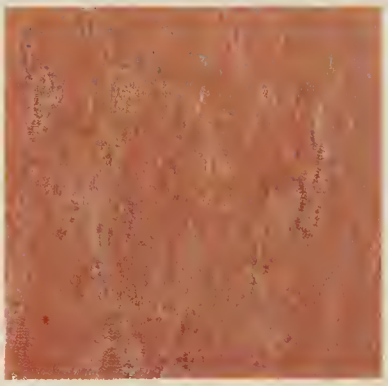
631 Mist Green—*designers series*



632 Puritan Gray—*designers series*



633 Mauve Blush Ton—*designers series*



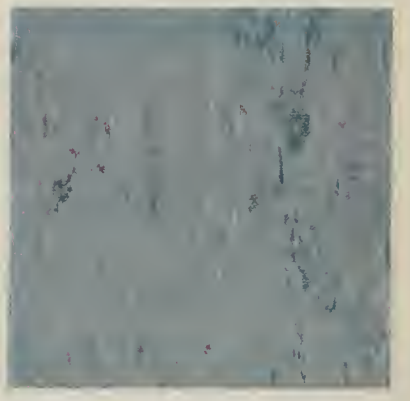
635 Ember Copper—*designers series*



636 Mimosa Yellow—*designers series*

Armstrong Rubber Tile is distinguished by its elear brillianee of eolor and the beauty of its burl graining. It is also the only rubber tile on the market which is mechanically reinforced. This means that it is scientifically formulated to resist curling and peaking of seams. This luxurious flooring is also chemically reinforced for greater durability. Quality ingredients and an exclusive curing formula give it a high resistanee to oils, greases, and many household solvents.

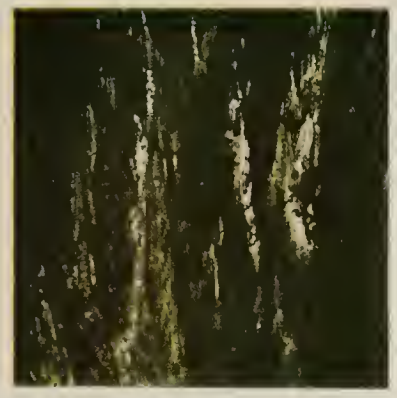
Armstrong Rubber Tile can be installed on grade level with Armstrong S-104 Chemical-Set Waterproof Cement or S-235 On-Grade Cement. It can be used below grade with Armstrong S-104 Chemical-Set Cement.



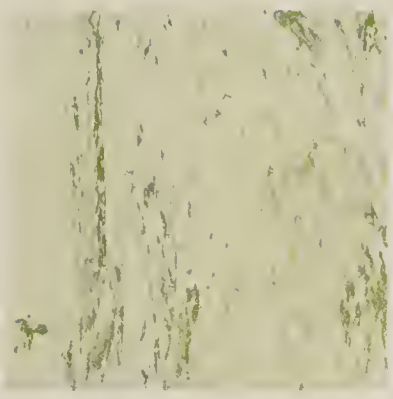
637 Gray Blue—*designers series*

Armstrong RUBBER TILE

1/8" and 3/16" gauges
9" x 9", 12" x 12", 18" x 36"



Cypress Green 649



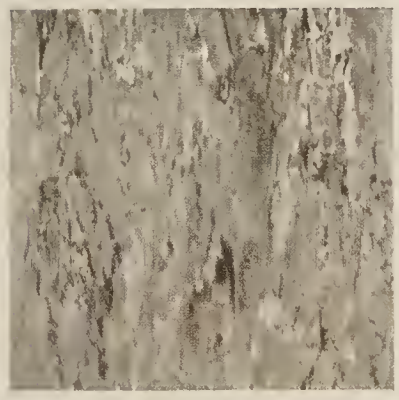
White Jade Green 651



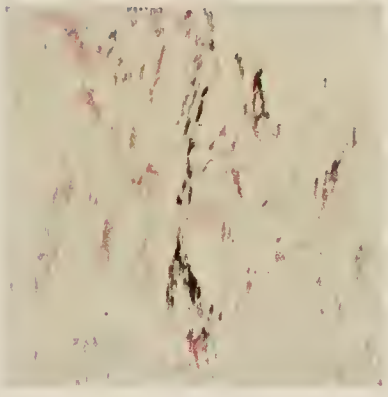
Jade Green White 652



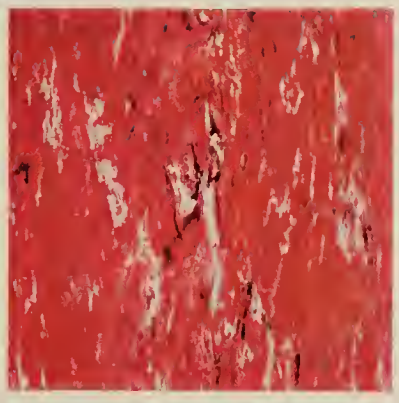
White Black 653



Silver Gray 656



White Ruby Red 664



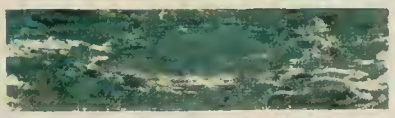
Ruby Red White 665



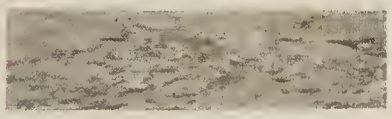
Plain Black 695



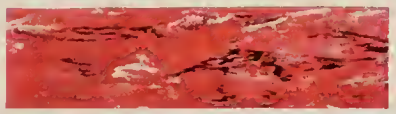
Ecrulette CB-609



Jade Green White CB-652



Silver Gray CB-656



Ruby Red White CB-665



Plain Black CB-695



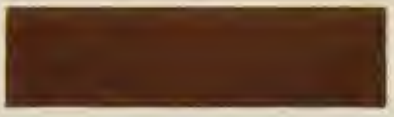
Plain Gray CB-696*



Plain Red CB-697*



Plain Green CB-698*



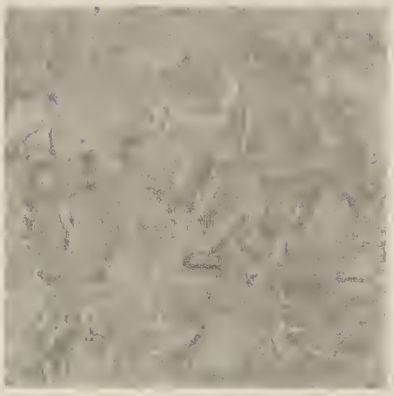
Plain Brown CB-699*

Armstrong Top-Set Rubber Cove Base. Available in 4″ and 6″ heights, 36″ long.

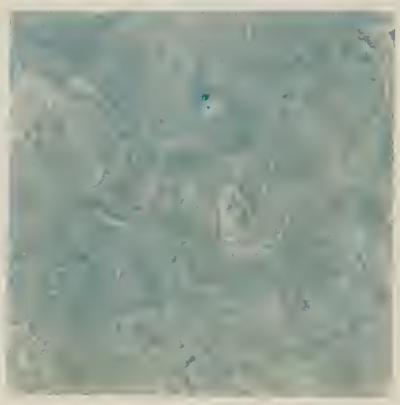
* 4″ high only

Armstrong RUBBER TILE

1/8″ and 3/16″ gauges
9″ x 9″, 12″ x 12″, 18″ x 36″



150 Fog Gray



151 Iceberg Green



152 Pink Beige



153 Ivary Dawn



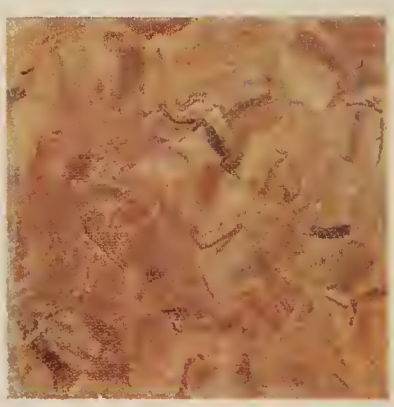
154 Misl Gray



155 Warm Taupe



156 Sunset Yellow



157 Tanbark Brown

A special manufacturing process gives this exclusive Armstrong floor unique properties not found in any other resilient flooring. Its remarkable toughness is the result of a special aging process. Armstrong Linotile is highly resistant to wear and withstands furniture loads of 200 pounds per square inch without indenting. Its wearing surface goes all the way through to the back of the material.

Besides being the most durable of the Armstrong floors, Linotile is also one of the easiest and economical of all floors to maintain. This feature makes it especially suitable for commercial interiors and for areas in the home which receive exceptionally heavy traffic. In addition to its other practical qualities, Armstrong Linotile is completely greaseproof.

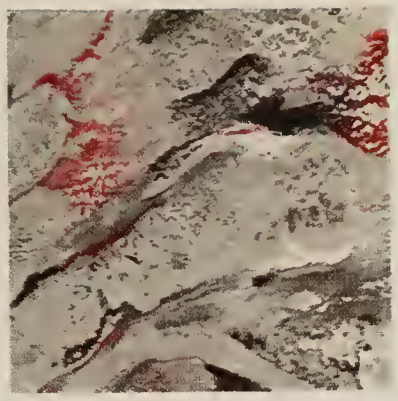
Armstrong new formula Linotile with T-58, a new ingredient, offers exceptionally clear colors and design. Linotile is made in two distinct style effects. The new textured series on this page presents an original concept in floor design. Linotile is also offered in the marbleized design shown on the next two pages. These marbleized stylings, which have proved exceedingly popular throughout the years, are made in many lovely colors.

Armstrong LINOTILE

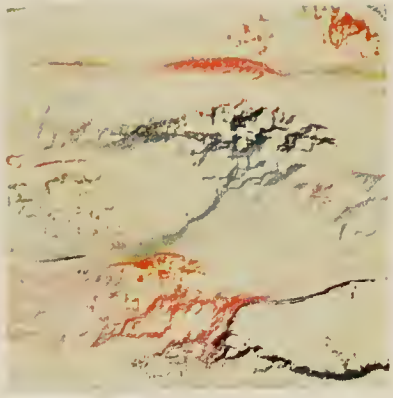
1/8" gauge
9" x 9", 12" x 12", 18" x 36"



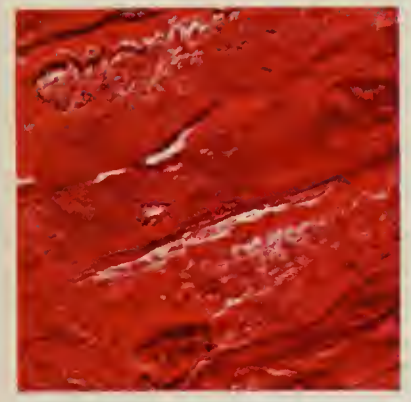
Graphite Gray 169



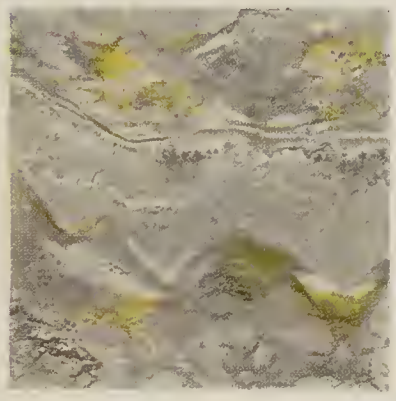
Ruby Gray 170



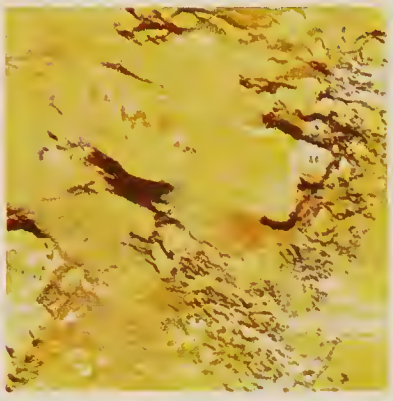
Rainbow 171



Sultan Red 172



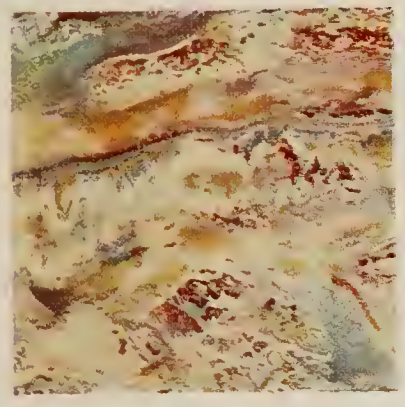
Mistglow 173



Sunglow 174



Cacao Verde 175



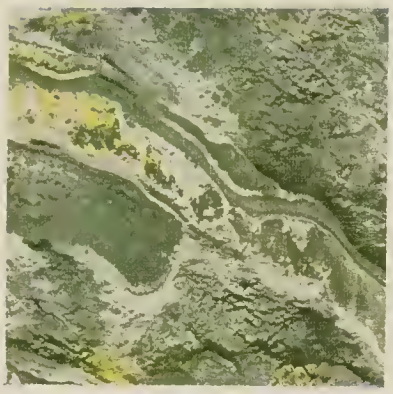
Beige Antique 176



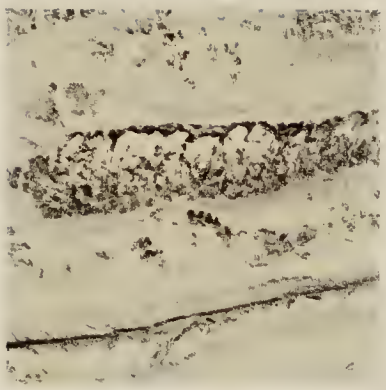
In this attractive kitchen, Linotile patterns 173, 174, and 177 were used in a custom design.

Armstrong LINOTILE

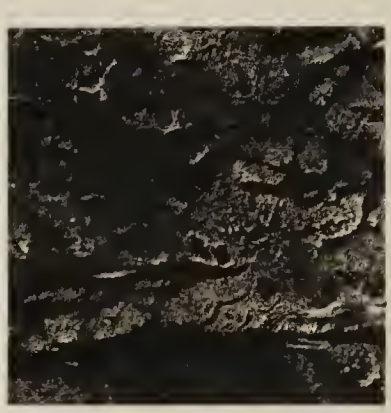
1/8" gauge
9" x 9", 12" x 12", 18" x 36"



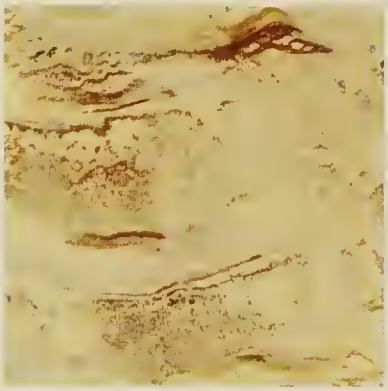
177 Landscape Green



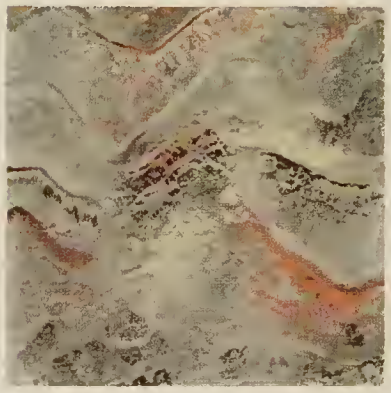
178 Alabaster



180 Jet Black



183 Travertine



185 Rase Gray



186 Palmetta Green—*designers series*



187 Manila Tan—*designers series*



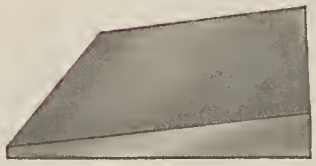
189 Siracca Taupe—*designers series*



190 Tawny Capper—*designers series*



191 Old Ivory—*designers series*

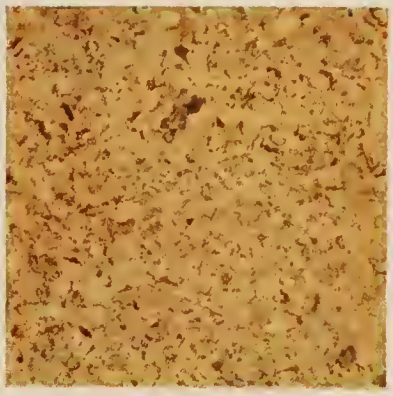


Armstrong Linotile Beveled Edging is used to finish the exposed edges of all types of resilient floors at doorways and on aisles. It is made in 1/8″ gauge, 1″ wide and 36″ long, in all Linotile colors. Linotile Beveled Edging S-17 tapers to 1/32″ on the edge.

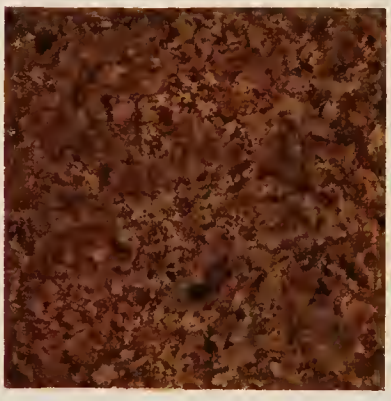
Armstrong LINOTILE

1/8″ gauge
9″ x 9″, 12″ x 12″, 18″ x 36″





Mocha Tan 410



Coconut Brown 411



Natural Design 1005
Custom Vinyl Cark Tile



Randam Driftwood Design 1006
Custom Vinyl Cork Tile

The beauty of rich cork colorings and authentic corkwood textures give this beautiful flooring the air of rich dignity in keeping with the finest modern décor. This unusual beauty is available in several types and gauges of Cork Tile, each designed for a specific budget.

Armstrong 3/32″ Cork Tile is ideal for home installation. Extremely flexible, this new gauge is moderately priced. There are also heavier gauges in standard Cork Tile: 1/8″, 3/16″, and 5/16″. Custom Vinyl Cork Tile is a luxury flooring intended for the smartest of modern interiors. This fine floor features large cork particles fused with vinyl binders which give it unusual beauty and high resistance to wear. It is made in Natural Design 1005 and in the Random Driftwood Design 1006.

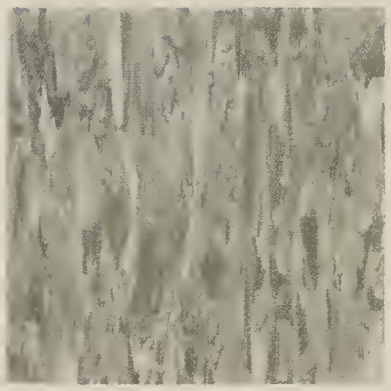
Cark Tile—3/32″,* 1/8″, 3/16″, and 5/16″ gauges
9″ x 9″, 12″ x 24″, 6″ x 12″, 12″ x 12″, beveled and straight edged
*3/32″ gauge in 9″ x 9″, straight edged only

Custom Vinyl Cark Tile—1/8″ gauge
Pattern 1005—9″ x 9″, beveled and straight edged
Pattern 1006—9″ x 9″, straight edged only

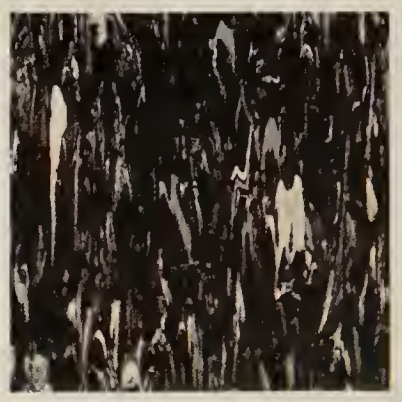
Armstrong CORK TILE



460 Carrara White



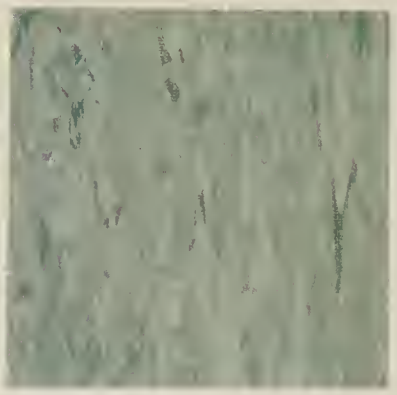
461 Trieste Gray



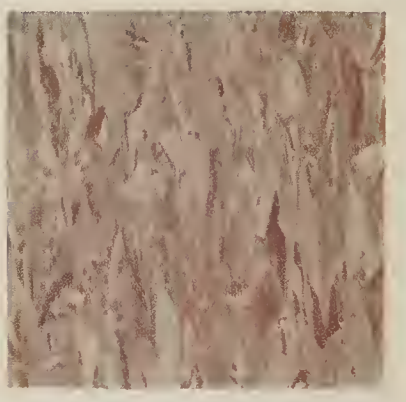
462 Imperial Black



467 Capra Taupe



469 Aspen Green



471 Desert Taupe



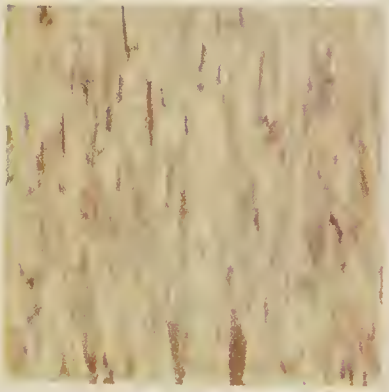
472 Mist Gray



474 Sahara Beige



475 Empire Yellow



476 Ecru Beige

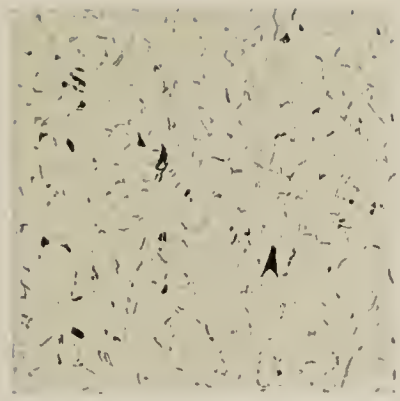


477 Bardeaux Red

This homogeneous vinyl flooring is made in two stylings—the Burl Grain series on this page and the Imperial group shown on the next two pages. Dimensionally stable, Custom Corlon Tile will not shrink or expand. It is also impervious to cigarette burns and many household solvents and acids.

Armstrong CUSTOM CORLON TILE

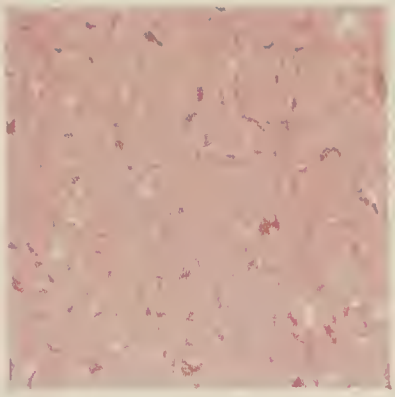
3/32″ and 1/8″ gauges
9″ x 9″, 12″ x 12″, 18″ x 36″



imperial series – Palar White 1400



imperial series – Onyx Black 1401



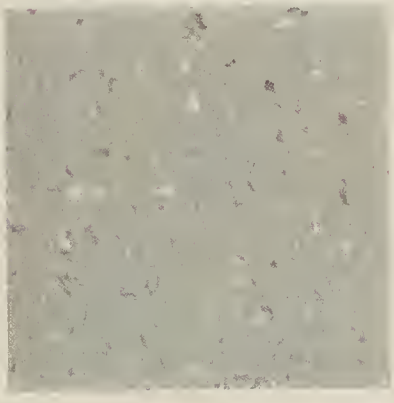
imperial series – Bermuda Pink 1402



imperial series – Shell Beige 1403



imperial series – Verdure Green 1404



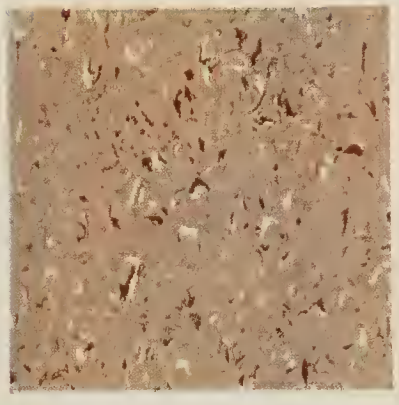
imperial series – Crystal Gray 1405



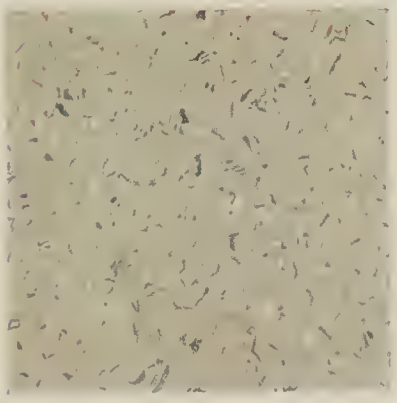
imperial series – Rustic Capper 1406



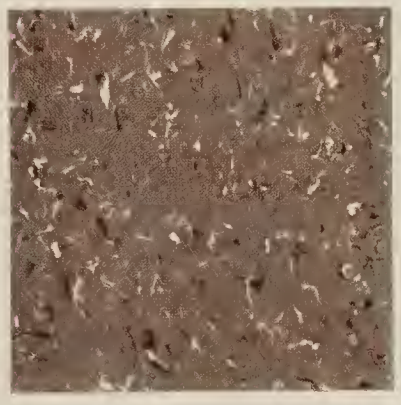
imperial series – Antique Ivary 1407



imperial series – Tawny Sand 1408



imperial series – Turquaise Beige 1409



imperial series – Male Taupe 1410



imperial series – French Gray 1411

Armstrong CUSTOM CORLON TILE

3/32″ and 1/8″ gauges
9″ x 9″, 12″ x 12″, 18″ x 36″



1412 Festival White— *imperial series*



1413 Honey Beige— *imperial series*



1414 Mint White— *imperial series*

The plain colors at the right are beautiful in over-all floor designs or when used as accenting borders or custom insets.

The plain colors in Custom Corlon Tile have decorative versatility. This means that they can be used with a variety of stylings in Burl Grain Custom Corlon Tile or with colorings in the Imperial Custom Corlon line.

1460 Plain White



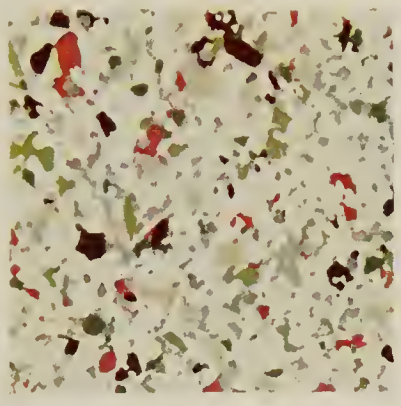
1461 Plain Block



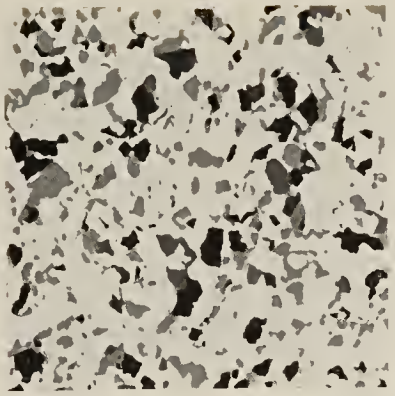
The plain colorings in Custom Corlon Tile are often used as accents. Here, plain white and block strips are used to accent floors of contrasting colors.

Armstrong CUSTOM CORLON TILE

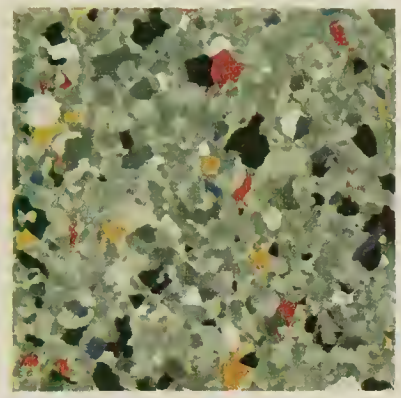
3/32" and 1/8" gauges
9" x 9", 12" x 12", 18" x 36"



6200



6202



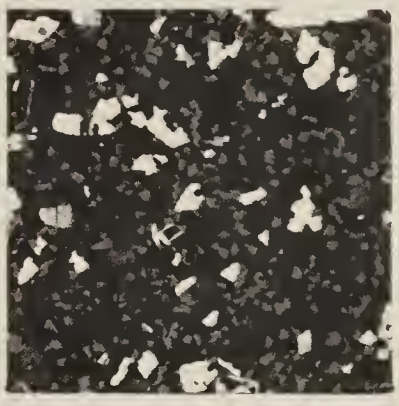
6203



6205



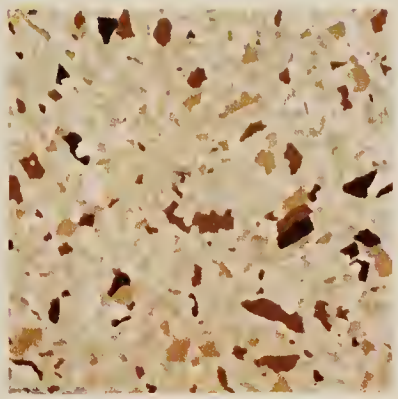
6208



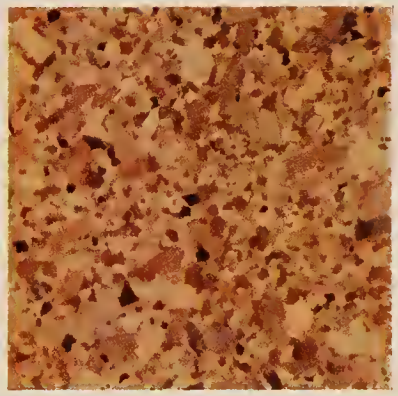
6210



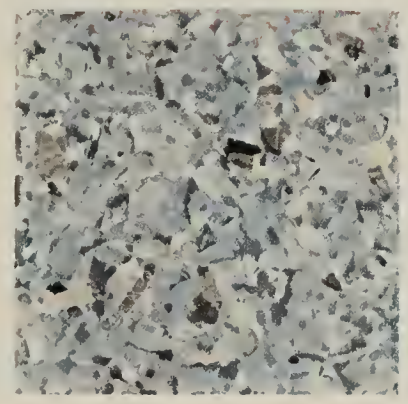
6213



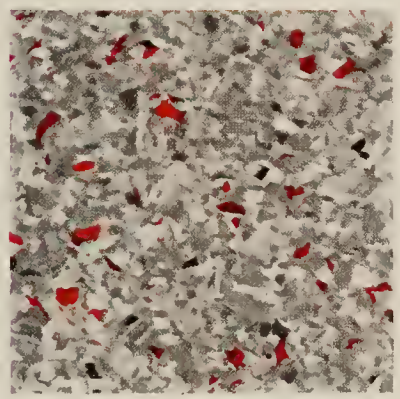
6214



6215



6216



6217

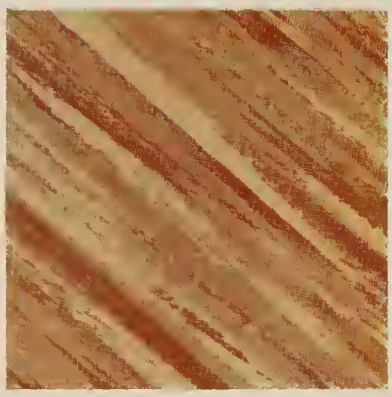
Armstrong Terrazzo Corlon Tile is made in a special Service Gauge for extra flexibility and economy. Made with famous Armofelt Back, this floor offers the same practical advantages found in heavier gauges of vinyl-plastic floorings. Quality plastic ingredients give it deep, rich colors and exceptional resistance to household chemicals.

Armstrong TERRAZZO CORLON TILE

service gauge
9″ x 9″



1865



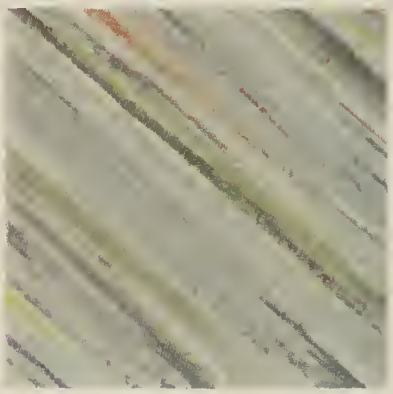
1866



1867



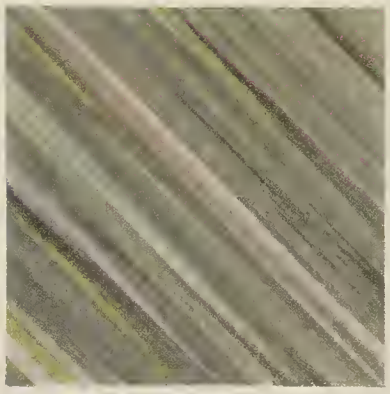
1868



1869



1870



1871



Parquet Linoleum Tile is made in three different types shown on the following pages. The 9″ x 9″ size illustrated on this page features diagonal brush-stroke graining. Unusual floor designs can be created simply by alternating the graining of each tile.

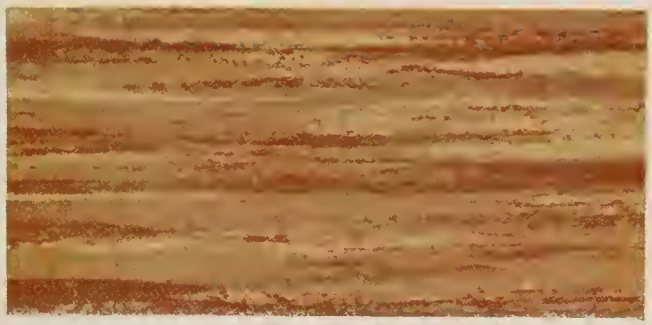
Made in Service Gauge only, Parquet Linoleum Tile is extremely flexible and can be installed by the amateur handyman as well as by professional floor craftsmen.

Armstrong PARQUET LINOLEUM TILE

service gauge
9″ x 9″



1800



1801



1840



1841



1842



1843



The 6″ x 12″ size in Armstrong Parquet Linoleum is adaptable to a variety of custom treatments not possible with 9″ x 9″ tiles. One, two, or more colorings can be used together to form interesting parquetry effects. The panel at the left, for example, illustrates three colorings of 6″ x 12″ Parquet Linoleum Tile used together in one floor area.

The rich natural wood tones featured in this new floor make it ideal for use in the living room, den, or dining room. It also makes a beautiful background for rugs.

Armstrong PARQUET LINOLEUM TILE

service gauge
6″ x 12″



1890



1891



1895

These four stylings in Parquet Linoleum Tile are designed to simulate the rich effects of expensive parquetry floors. Each tile has a band of color bordered on each side by two equal bands of a contrasting color.

When installed in a floor area, these stylings give the appearance of an intricate parquet floor. Additional interest can be achieved by alternating the graining of the tiles during installation.



1896

Armstrong PARQUET LINOLEUM TILE

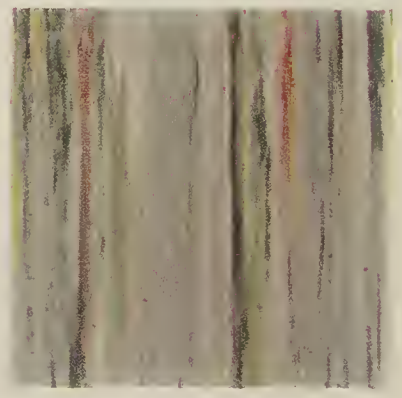
service gauge
9″ x 9″



1800



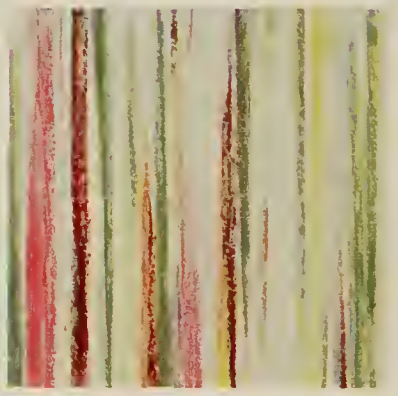
1801



1802

For areas where bright colors are desired—and where low cost is a factor—Decoray Linoleum Tile is an ideal choice. This attractive flooring is made in two gauges—Standard and Service. The latter gauge has exceptional flexibility which simplifies installation. The job is made still easier because the edges of Decoray Linoleum Tile are cut at the factory to assure straight, tight seams.

Decoray Linoleum Tile also has decorative versatility. The stylings have multicolored striations, making them suitable for almost any type of decorating motif, modern or traditional. The striations also conceal dirt.



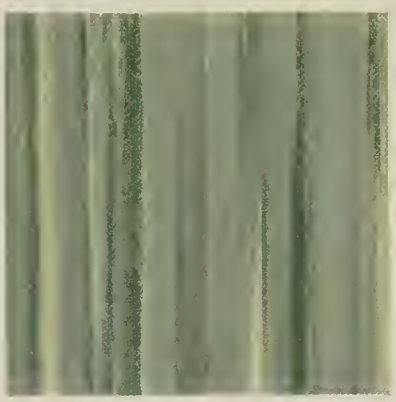
1803

Armstrong DECORAY LINOLEUM TILE

standard and service gauges
9″ x 9″



1804



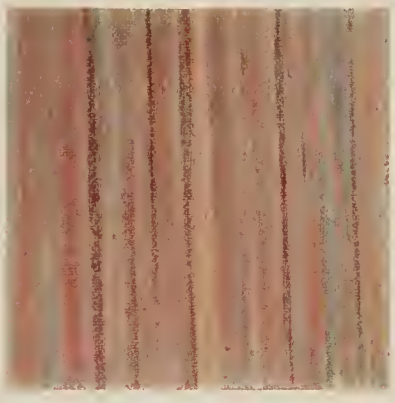
1806



1807*



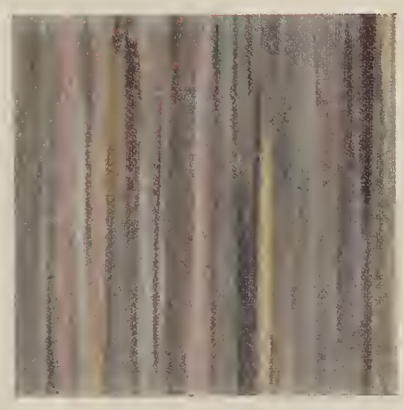
1810*



1813



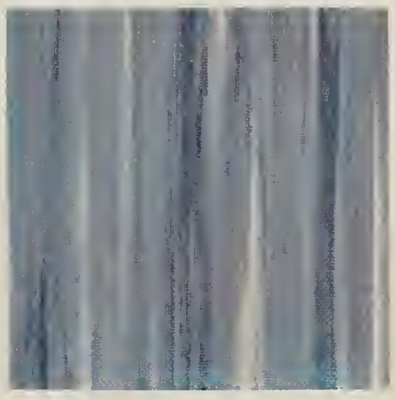
1814



1815



1816*



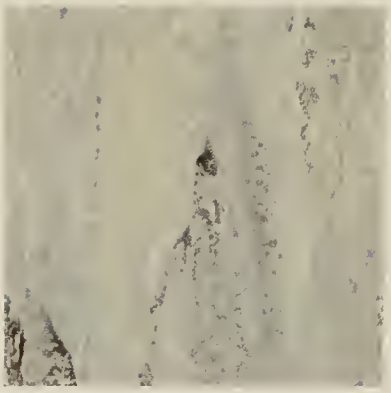
1817*

Because linoleum tile is first-quality Armstrong Linoleum cut into blocks, it offers the advantages of two floors. First, it has the decorative and practical advantages of Armstrong Linoleum in roll form. It also possesses the versatility of resilient tile floors. That is, with linoleum tile it is possible to create novel custom effects not possible with sheet material.

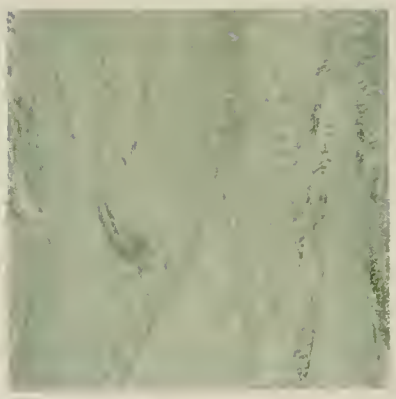
In Decoray Linoleum Tile, these advantages are combined ideally. This smart tile flooring offers the same colorful beauty found in Decoray Linoleum. The bold brush-stroke graining which distinguishes this smart flooring is especially suited for 9″ x 9″ tile form because it can be alternated as each tile is installed, making a number of interesting floor effects possible. A truly distinctive floor design can be made by using several colorings of Decoray Tile in a single area.

Armstrong DECORAY LINOLEUM TILE

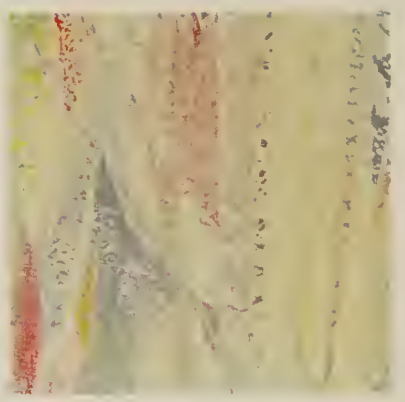
standard and service gauges
9″ x 9″
*in service gauge only



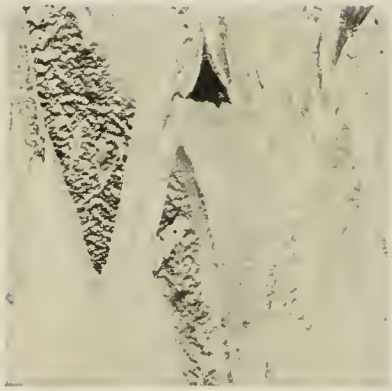
1500



1501



1503



1508

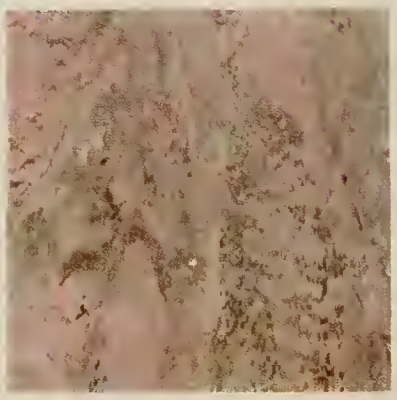


1509

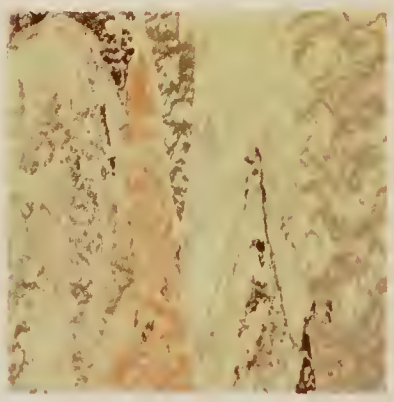


1516





1521



1523

The bold sweeping design of Armstrong Royelle Linoleum is especially adaptable to 9″ x 9″ tile form. Handsome in an all-over floor effect, this design provides an equally handsome appearance in tile form. A number of decorating "tricks" can be accomplished with Armstrong Royelle Linoleum Tile because it is installed one block at a time. In the illustration above, for example, the strokes of color were alternated as each Royelle Linoleum Tile was installed.

Armstrong ROYELLE LINOLEUM TILE

standard gauge
9″ x 9″



Beige 66.7%, Terra Cotta 33.3%



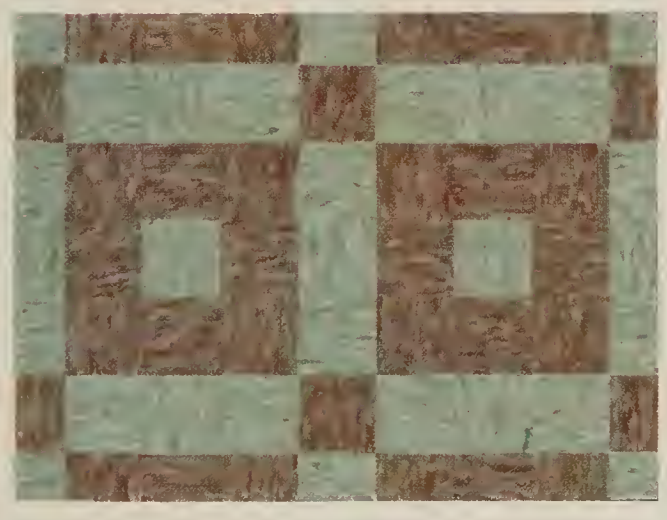
Gray 56%, Turquoise Blue 44%



Beige 58.4%, Copper 20.8%, Black 20.8%



Beige 75%, Taupe 12.5%, Blue 12.5%



Taupe 56%, Green 44%

Armstrong Resilient Tiles present many opportunities to create handsome floor designs. Since a tile floor is installed block by block, it is possible to design any number of striking floors by combining various colors. In addition, tiles can be used to architectural advantage. For example, different colored rows of tile running the width of a narrow room can make that room appear wider. Different colorings of tile running the length of a room serve a practical use as direction markers in commercial areas.

Shown here are just a few of the many custom floor designs which can be worked out with any type or color of Armstrong Resilient Tile. Percentages of various colors used in each design are also indicated.

Armstrong RESILIENT TILE DESIGNS



VINYL PLASTIC SURFACING
A highly flexible vinyl-plastic covering for walls and counter tops. Extremely durable, it has exceptional resistance to stains, moisture, alkali, and household chemicals. Smooth surface is easy to keep clean*Page* *140*

WALL COVERINGS and COUNTER TOPS

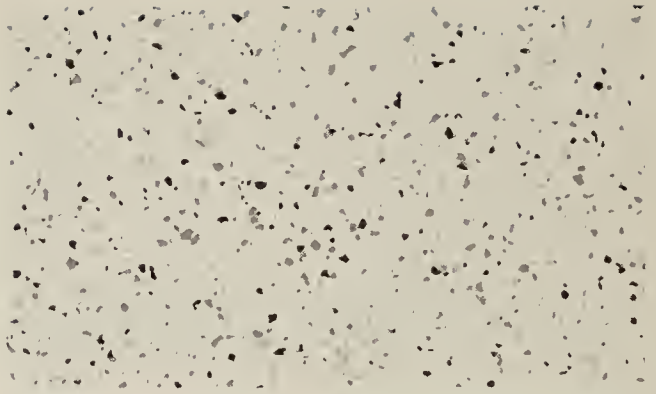
VINYL WALL TILE A colorful, durable wall tile especially recommended for commercial and institutional interiors. Fire resistant, it is listed under the label service of the National Board of Fire Underwriters*Page* *141*

CORLEX A rigid high-pressure plastic laminate surfacing. Ideal for sinks, counter tops, and other work surfaces. Exceptionally durable and easy to clean. Many of the colorful patterns are especially designed to match and harmonize with Armstrong Floors*Pages* *142–143*

Capwell Department Store
Oakland, California
Counter Tops: Armstrong Vinyl Plastic Surfacing



8600 Red



8601 White and Black



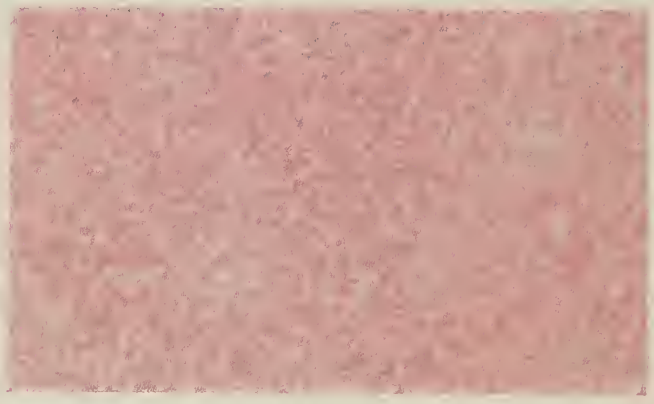
8602 Yellow



8603 Green



8604 Gray



8605 Pink



8606 Beige



8607 Blue

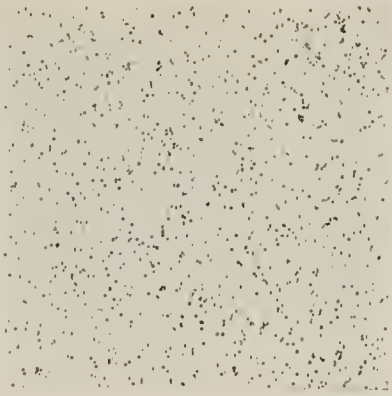
Armstrong VINYL PLASTIC SURFACING

30", 42", and 2 yards wide

Reproductions approx. 1/2 actual size



Black 8500



White 8501



Yellow 8502



Green 8503



Gray 8504



Pink 8505



Beige 8506



Turquoise 8507



Cork 8508

Armstrong Vinyl Wall Tile is a completely new type of wall finish for commercial and residential interiors. Fire resistant, it is ideally suited for use in schools, hospitals, and other areas where an attractive and practical wall covering is needed. Vinyl Wall Tile's fire-resistant properties are listed on the Underwriters' Laboratories Label which is affixed to each carton.

The colors in Vinyl Wall Tile have been selected to complement one another so that two or more colors can be used effectively on the same wall surface.

Vinyl Wall Tile is made of vinyl asbestos and has a tough plastic surface that does not easily stain, scuff, scratch, or show signs of hard usage. It requires just an occasional light cleaning to keep it looking beautiful. Its smooth-cut edges fit tightly together, making it easy to install and adding to the appearance of the completed job.

Armstrong VINYL WALL TILE

9″ x 9″



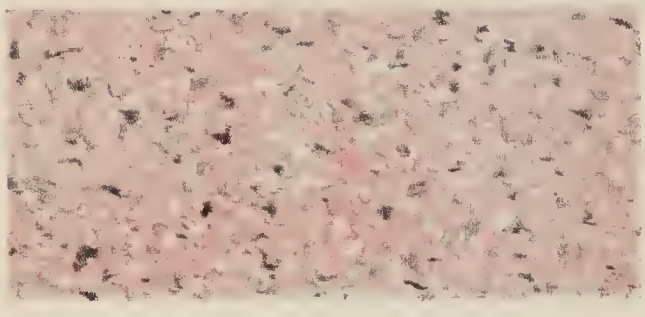
7600 Beige



7602 Gray

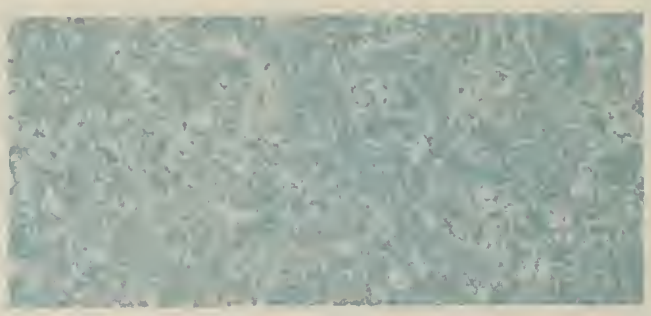


7641 White-Black



7643 Pink-Chorcool

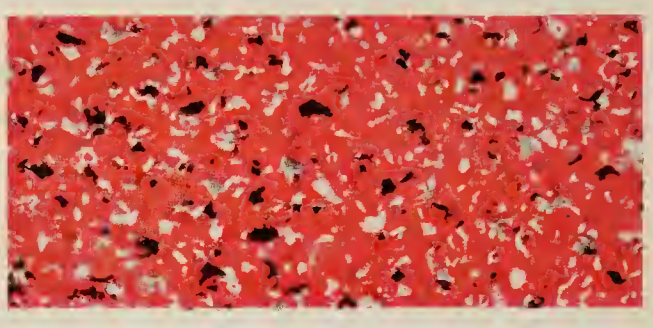
Armstrong Corlex is a high-pressure plastic laminate surfacing for sinks, counters, and work surfaces. It is available in twenty-two stylings including nine exclusive designs and thirteen standard patterns. The exclusive Swirl and Terrazzo stylings shown on this page have been especially designed to harmonize with various Armstrong floors. Corlex is the only plastic laminate surfacing which offers this unique feature.



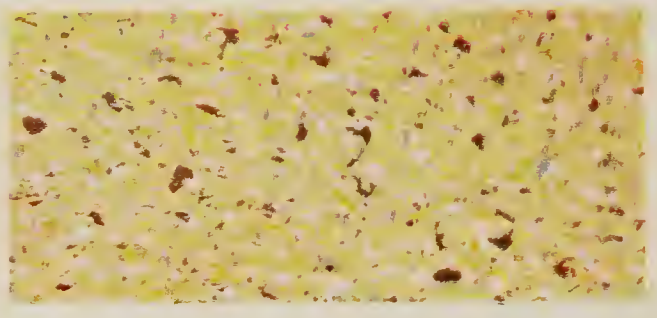
7601 Turquoise



7603 Pink



7642 Red



7644 Yellow



7645 White Multicolor

Armstrong CORLEX

Sizes from 24″ x 96″ to 48″ x 120″



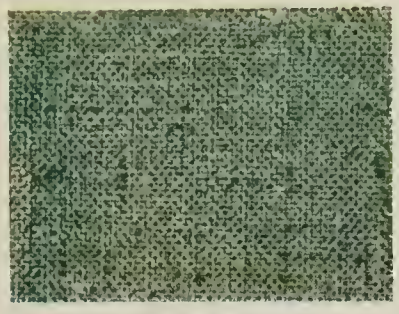
Gray Linen 7101



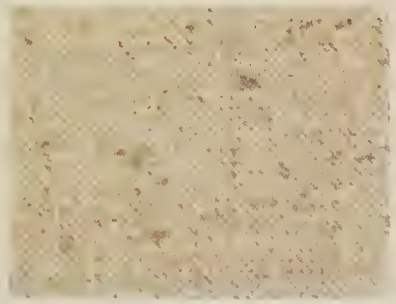
Red Linen 7102



Yellow Linen 7104



Green Linen 7105



Ton Linen 7119



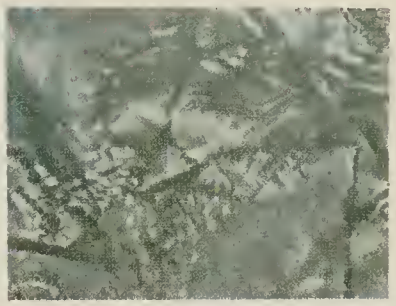
Gray Pearl 7201



Red Pearl 7202



Yellow Pearl 7204



Green Pearl 7205



Crystalite Gray Pearl 7301



Plain Black 7410



Birch 7501



Frosted Walnut 7502

In addition to the nine exclusive patterns, Armstrong Corlex is offered in the thirteen standard patterns shown on this page. These standard patterns can be used to complement many Armstrong floors.

All of the Corlex stylings with the exception of Plain Black are available in both satin and glossy finish. The Plain coloring (No. 7410) is made in satin finish only.

Armstrong Corlex can be installed by either the home or professional mechanic. It is available in sizes ranging from 24″ x 96″ to 48″ x 120″.

Armstrong CORLEX

Sizes from 24″ x 96″ to 48″ x 120″

FOR YOUR CONVENIENCE. Use these post cards to obtain additional data or samples of Armstrong Floor, Wall, and Counter-Top materials

☐ Please send me quality samples of the following Armstrong products:

- ☐ Asphalt Tile
- ☐ Cork Tile
- ☐ Corlex
- ☐ Corlon
- ☐ Cushion-Eze Underlayment
- ☐ Custom Corlon Tile
- ☐ Custom Vinyl Cork Tile
- ☐ Excelon Tile
- ☐ Linoleum
- ☐ Linotile
- ☐ Rubber Tile
- ☐ Plastic Surfacing
- ☐ Vinyl Wall Tile

☐ Please get in touch with me at once. I have a specific problem that I would like to discuss with your representative.

Name

Firm

Address

City State

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- ☐ Corlex
- ☐ Corlon
- ☐ Cushion-Eze Underlayment
- ☐ Custom Corlon Tile
- ☐ Custom Vinyl Cork Tile
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- ☐ Linotile
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